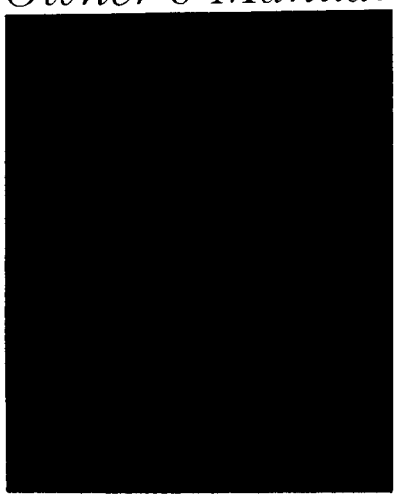
KAWAI

PERSONAL KEYBOARD

FS690

Owner's Manual



Thank you for your purchase of the KAWAI FS690 Personal Keyboard.

How to use this manual

This manual is divided into two sections: Basic Operation and Advanced Operation.

The Basic Operation section will help you become familiar with the basic, but extremely powerful, features of the FS690. By the time you're through with this first section, you will have a clear understanding of how to select Tones and Rhythms, adjust Tempo, use Auto-Accompaniment and Recorder functions, and operate ONE FINGER AD-LIB.

The Advanced Operation section will help you explore FS690's more advanced features such as combining Tones, adding Effects, using the Synthesizer and MIDI, and programming Accompaniments or ONE FINGER AD-LIB phrases. To get the ***most*** from your FS690, please read this entire manual ***carefully*** -- beginning with the important information on page B – 1.

Should you have any trouble getting the FS690 to perform properly, please refer to the Table of Contents (on the next page) and review the pertinent section of this instruction manual.

Have fun learning to play your FS690!

■ NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

— Reorient or relocate the receiving antenna.

— Increase the separation between the equipment and receiver.

— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

— Consult the dealer or an experienced radio/TV technician for help.

■ This instrument complies with the limits for class B digital apparatus, pursuant to the Radio Interference Regulations, C.R.C., c. 1374.

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1. Basic Operation Before Using the FS690

1. Cautions

- Do not subject the FS690 to severe shocks.
- Do not expose the FS690 to direct sunlight, or high temperatures such as inside your car on a warm day.
- Do not use the FS690 where there is excessive moisture or dust.
- Do not disassemble or attempt to modify the FS690.
- Should the FS690 become soiled, clean it using a soft, dry cloth. If this does not remove the stain, wet the cloth slightly before wiping. Never use alcohol or thinner to clean the FS690.
- Do not allow foreign matter to enter the gaps between the keys or around the buttons.

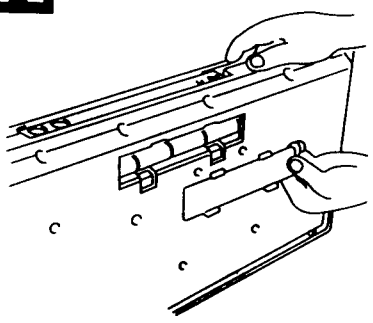
2. Connecting the power supply

The FS690 can use either your home AC power outlet or dry cell batteries as a power source.

■ To insert batteries:

1. Turn the unit over and remove the battery cover.
2. Insert six Size C dry cell batteries. Be sure that they are aligned correctly.
3. Replace the battery cover.

2-2



Size C dry cell battery x 6

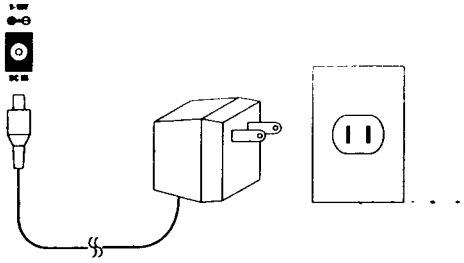
Notes:

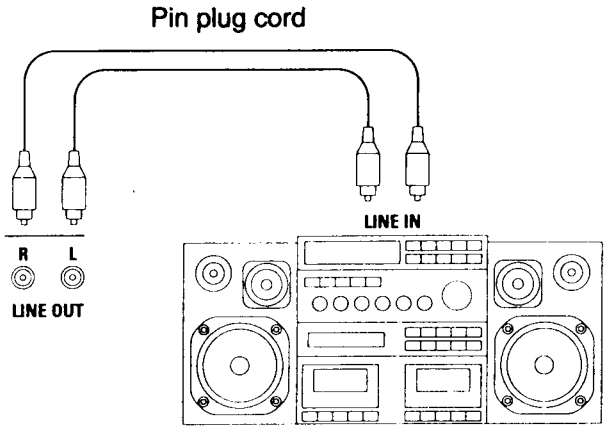
— As the batteries reach the end of their usable lifespan, the sound of the FS690 will become quieter and the sound quality will begin to change. The unit may also begin to function improperly. At that time, you should replace all six of the batteries.

— Do not mix battery types, as this may cause problems such as battery fluid leakage.

— Remove the batteries when not using the FS690 for long periods of time.

Before Using the FS690





Note:

You cannot Back up the internal memory once the battery built into the FS690 is drained. So, we recommend that you save your important data into an external sequencer (see "Using an external sequencer" section on page A-30). For a replacement Battery, contact your authorized KAWAI dealer.

■ To use an AC power outlet:

Connect a PS-121 (or PS-123) adaptor (available separately) to the adaptor terminal on the rear panel of the FS690. Then, connect the adaptor to a wall socket.

Important:

We recommend that you use a KAWAI AC adaptor (9 or 12-volt) with the FS690. If you decide to use a universal adaptor (from another manufacturer) be sure that the voltage selector on that adaptor is set between 9 to 12 volts. The polarity selector must be set to "negative" (–) polarity. If your universal adaptor is set on "positive (+)", your FS690 will <u>not</u> operate (or will run on batteries until the batteries are drained).

■ Connecting the FS690 to an audio device

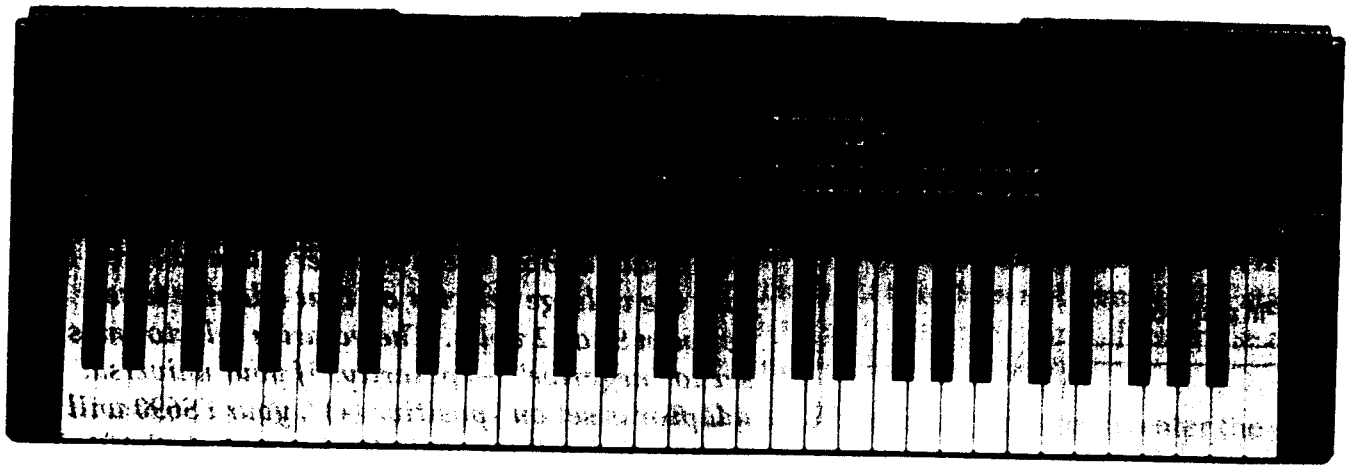
To enjoy listening to the sound of your FS690 through your home stereo system or other external audio device, purchase a standard connecting cord (Stereo RCA pins) at an electrical goods shop or an audio specialty store. Use it to connect the FS690's LINE OUT jacks to the LINE IN or AUX IN jacks on your audio system.

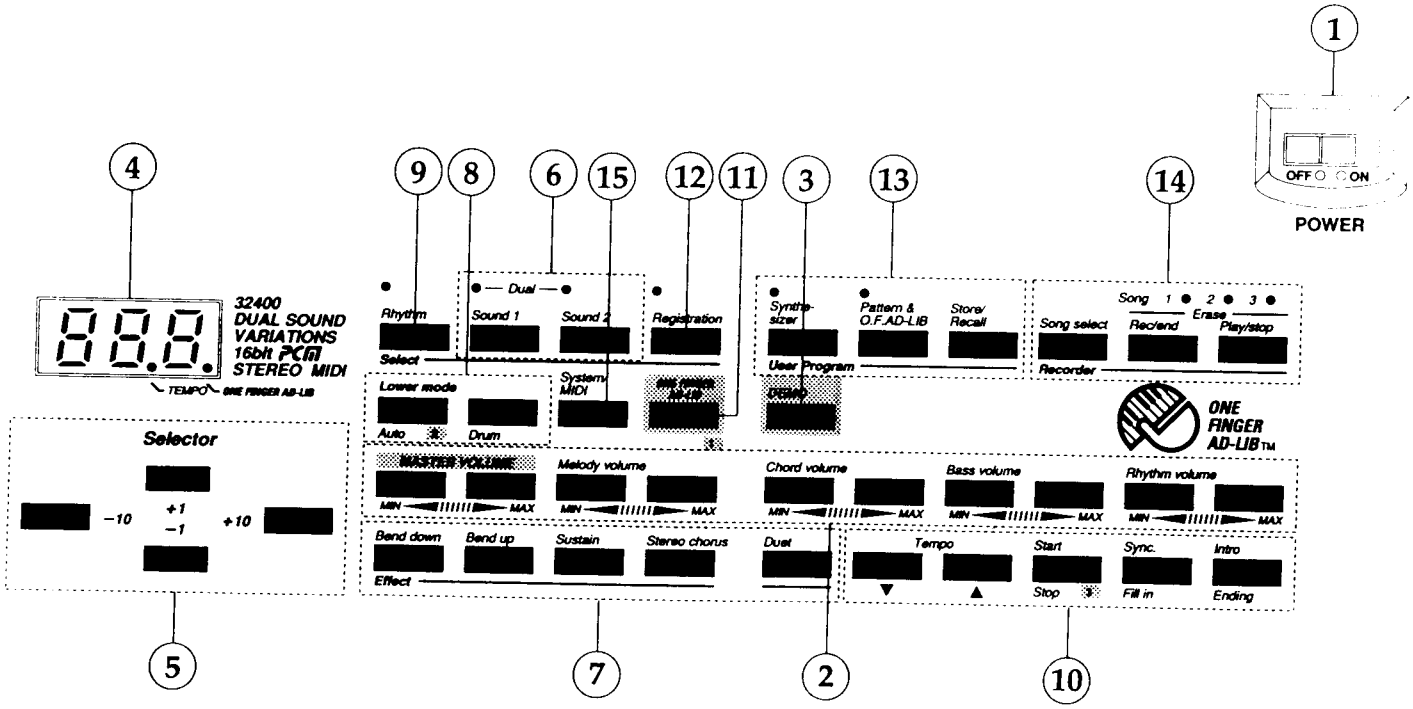
■ About the FS-690's internal memory

The contents of the FS-690's internal memory will be kept stored by a battery built into the unit for a period of up to five years. The data that are maintained by this battery are as follows:

— Song data recorded using the recorder.
— Sounds created using the synthesizer.
— Accompaniment patterns created using the pattern maker.
— Phrases created using the programmable ONE FINGER AD-LIB feature.
— Registration settings.

Note that if you turn the power switch ON while holding down keys C and E at the left end of the keyboard, all of the contents of the memory will be erased, and the keyboard's factory settings will be restored.





■ Protective plastic covering on front panel

Your FS690 comes equipped with a thin plastic covering over the front panel, designed to protect the panel from dust and scratches. If you want to remove this covering, carefully use a fingernail to lift up one of the corners. Then, slowly peel off the covering and discard it.

Overall Diagram and Explanation (Operation panel)

① **POWER** switch
This switch turns the power on and off. When the power is turned on, the display window will light, showing the number 001.

② **Volume Control** buttons
The master volume buttons control overall volume of all notes played on the keyboard. Melody, Chord Accompaniment, Bass, and Rhythm volume can be adjusted separately using the appropriate buttons found to the right of Master volume.

③ **Demo** button
Pressing this button starts the built-in demo song contained in the FS690's memory. Press it again at any time to stop the demo song.

④ **Display**
The display window shows which sound or rhythm is currently selected. The window is also used to display a wide variety of other information which will be described later in this manual.

⑤ **Selector** buttons
These buttons are used to increase or decrease the numbers in the display window by intervals of 1 or 10.

⑥ **Sound 1** and **Sound 2** buttons
These buttons are used to select from among the one hundred sounds stored in the FS690.

⑦ **Effect** buttons
These buttons allow you to add variety to the FS690's one hundred sounds by adding effects such as Pitch Bend, Sustain, Stereo Chorus, and Duet harmony to them.

⑧ **Lower mode** buttons
These buttons are used to select the playing mode for the nineteen keys on the left end of the keyboard (the Lower Keyboard). There are three playing modes: "Normal mode" in which the Lower Keyboard plays the same sound selected for the Upper Keyboard; "AUTO mode" which lets the Lower Keyboard control FS690's Auto-Accompaniment; and "Drum mode" which lets the lower keys play the percussion sounds pictured on the case above each key.

⑨ **Rhythm** button
This button is used when selecting from among the one hundred rhythm and accompaniment patterns stored in the FS690's memory.

⑩ **Rhythm Control** buttons
The FS690's Rhythm and Auto-Accompaniment section gives you four types of patterns to work with: Intro Patterns that can be used at the start of a song; Fill-in Patterns, to add contrast and variety during a song; Ending Patterns; and Basic Patterns which will be the foundation of any song using Auto-Accompaniment. These four types of patterns are controlled using these buttons. The two tempo buttons can be used to control changes in Rhythm and Auto-Accompaniment tempo. Lastly, the **Sync.** button lets you start when you press a key in the Lower Keyboard.

⑪ **ONE FINGER AD-LIB** button
This feature allows you to sound like a "pro". with the touch of a finger.

⑫ **Registration** button

⑬ **User Program** buttons
These buttons allow users of the FS690 to:

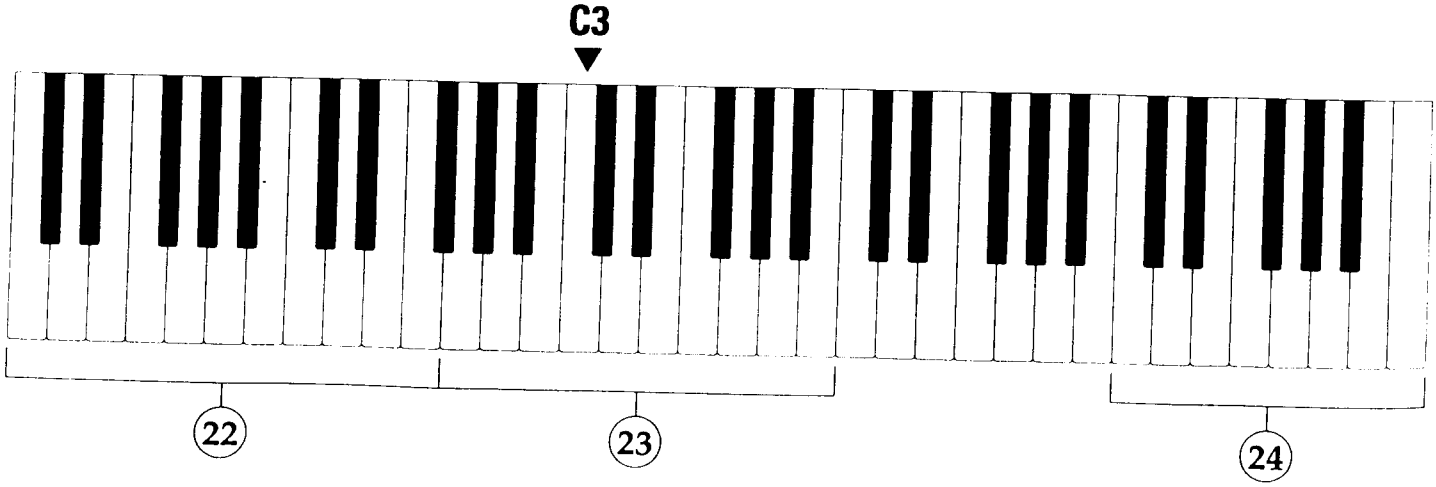
1) create new sounds (with the synthesizer);
2) create Rhythm and Auto-Accompaniment Patterns (Basic, Intro, Fill-in, and Ending) with Pattern Maker; and
3) create ONE-FINGER AD-LIB phrases.

⑭ **Recorder** buttons
These buttons allow you to record the songs you write or perform on the FS690.

⑮ **System/MIDI** button

[Rear Panel]

[Keys]



Overall Diagram and Explanation (Rear panel and Keys)

[Rear Panel]

⑯ **MIDI IN** and **OUT** jacks
These jacks are used to connect the FS690 to other MIDI instruments and equipment.

⑰ **Hold Pedal** jack
This jack allows you to connect a hold pedal (model F-1, available separately) to the FS690. When the hold pedal is depressed, notes played on the keyboard will play continuously for as long as the pedal is held down.

(This pedal has no effect on Rhythm and Auto-Accompaniment performance.)

⑱ **Accompaniment Hold** jack
The jack allows you to use the optional F-1 pedal in a different way from above. When connected to the Accompaniment Hold jack, the F-1 pedal can be depressed to add variety to Rhythm and Auto-Accompaniments. It can also function in the same manner as the **Sync./Fill in** button.

⑲ **Output** jacks
These jacks are used to send the FS690's sound through external speakers or a stereo system.

⑳ **Stereo Headphone** jack
When stereo headphones are connected to this jack, the sound from the speakers is cut off. This allows you to play the FS690 at night and at other times when you might be concerned about disturbing others.

㉑ **Power Adaptor** jack
This jack is used when connecting a power adaptor (model PS-121 or PS-123, available separately).

Important:

See page B-2 for special instructions if you are using a universal AC adaptor.

[Keys]

㉒ **Lower Keyboard** (C1 ~ F#2)
Used when the chord detection or hand percussion function are selected.

㉓ **ONE FINGER AD-LIB** keys (G2 ~ B3)
Used when the ONE FINGER AD-LIB function is selected.

㉔ **User program** keys (C5 ~ C6)
Used for programming synthesizer sounds, Auto-Accompaniments (Pattern Maker), and programmable ONE FINGER AD-LIB phrases.

Note:

Of course, the keys in the special keyboard sections named above also function as a normal keyboard when all automatic settings are off.

Important:

Throughout this manual, the keys on the FS690 will be referred to in the following manner:

C1 stands for "the first C" on the keyboard, counting from the left.

B2 stands for "the second B" on the keyboard from the left.

The total range of the FS690 is C1 to C6.

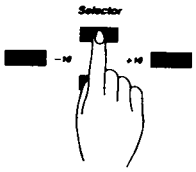
Getting Started on your FS690: Selecting Sounds

1

Check the POWER switch.

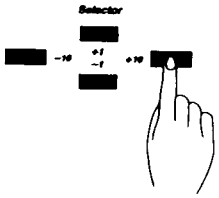
Display reads 001.

2



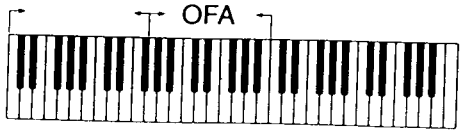
Display changes to read 002.

3



Select a sound numbered 41 through 50.

Lower Keyboard



OFA means ONE FINGER AD-LIB.

This section will show you how to select and play any of the sounds listed in the *"100 SOUND LIBRARY"* on the FS690's front panel.

1. First, check to be sure that the **POWER** switch is turned ON. The display should be lit, showing the number 001.

   Try pressing one of the keys on the keyboard. You should hear the sound which is numbered 01 (PIANO 1).

2. Next, look at the **Selector** buttons and find the button marked +1. If you press it, the number shown in the display should change to 002.

   When you press one of the keys on the keyboard, you will hear sound number 02 (PIANO 2).

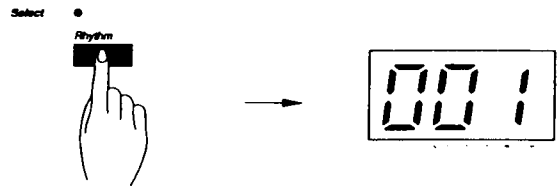
   You can use the **Selector** buttons to choose any of the FS690's one hundred sounds quickly and easily. The +1 button adds one to the number in the display, while the **+10** button adds ten.

   The **-1** button subtracts one from the number, and the **-10** button subtracts ten. The number shown in the display is the number of the sound currently selected.

3. If you select one of the SPLIT sounds, which are numbered 41 through 50 in the *"100 SOUND LIBRARY,"* you will find that the 19 keys on the left end of the keyboard (the Lower Keyboard) produce a different sound from the rest of the keys to their right.

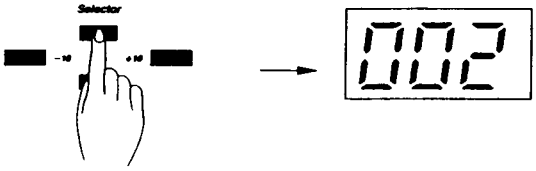
   Also, note that the numbers "wrap around," so that pressing the **+1** button when the display reads 100 will change the display to read 001.

Getting Started with Rhythms



Start rhythm.

Then press. . .



A Fill-in Pattern plays.

The Ending Pattern plays, and the rhythm ends.

This section will show you how to select and play any of the rhythms listed under the *"100 RHYTHMS LIBRARY"* on the FS690's front panel.

1. Begin by pressing the **Rhythm** button. The lamp above the switch will light, and the display will change to read 001.
2. If you press the **Start/Stop** button at this point, rhythm number 01 (DANCE 1) will begin to play. Now find the **Selector** buttons and press the **+1** button. The display will change to read 002 and the rhythm will change to number 02 (DANCE 2).

   You may use the **Selector** buttons in this way to select any rhythm you desire. The number in the display will change to indicate the number of the rhythm currently selected.
3. Try pressing the **Sync./Fill in** button at this point. The rhythm should play a "Fill-in" pattern suited to the rhythm currently selected. The Fill-in function is very effective when used to add variety within a song.
4. Next, press the **Intro/Ending** button. An Ending Pattern which matches the currently selected rhythm will play, and the rhythm performance will end. You can use this Ending Pattern to bring a song to an ending. Or, if you want the rhythm to end *without* the Ending Pattern, you can simply press the **Start/Stop** button.

Other Important Rhythm Functions

1

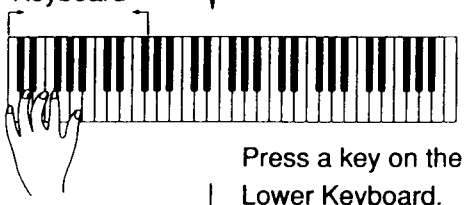
Rhythm is stopped.

Pressing this button starts the Intro Pattern.

2

Rhythm is stopped.

Lower Keyboard



Press a key on the Lower Keyboard.

Rhythm starts simultaneously.

3

Then press. . .

Lower Keyboard

Press a key on the Lower Keyboard.

Rhythm starts simultaneously with Intro Pattern.

1. If you press the **Intro/Ending** button while the rhythm is off, you will hear an Intro Pattern, after which the Basic Pattern for the rhythm selected will begin to play.
2. If you press the **Sync./Fill in** button while the rhythm is off, the button functions as a **Sync.** button only. When **Sync.** button is pressed, the rhythm will begin to play the moment you press a key on the Lower Keyboard. The rhythm will synchronize with your touch of the keyboard.
3. If you press the **Sync./Fill in** button and then the **Intro/Ending** button, the rhythm will begin to play (starting with the appropriate Intro Pattern) the moment you press one or more of the keys on the Lower Keyboard.
4. Try pressing the **Intro/Ending** button while the rhythm is playing. In this case, it operates as an **Ending** button. You will hear an Ending Pattern in a few seconds after pressing the button.

Changing Rhythm Tempo

1

You can use the **Tempo** buttons to change the tempo of the rhythm pattern. The **Tempo ▼** button makes the tempo slower. The **Tempo ▲** button makes the tempo faster. The longer you hold down each of these buttons, the more the tempo will change.

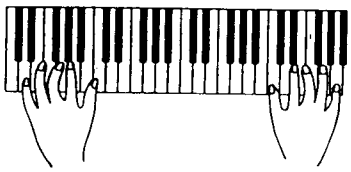
Pressing either of the **Tempo** buttons once — just after selecting a new rhythm — will change the tempo to a rate that suits that new rhythm. At this time, the display will briefly show " - - - " to indicate that the "standard" tempo for that rhythm has been selected. Then, if necessary, you can use the **Tempo** buttons to adjust the tempo further.

When you press and hold down either of the **Tempo** buttons, the display will change to read dn (short for "down") or UP depending on which **Tempo** button you are pressing. If you continue to press the **Tempo ▼** button to minimum tempo, the display will change to read SYC, which is the FS690's abbreviation for SYNC. This setting is used for a different function related to MIDI operation.

The small lamp at the bottom of the display will also blink in time with the tempo.

* For more information on tempo SYNC., see page A-31 in the Advanced Operation section of this manual.

Using Auto-Accompaniment for easy ensemble playing



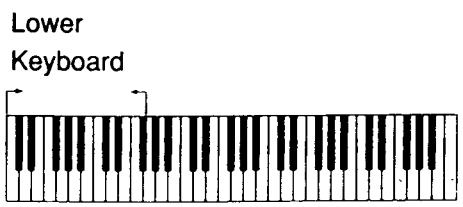
Chords with left hand.

Melody with right hand.

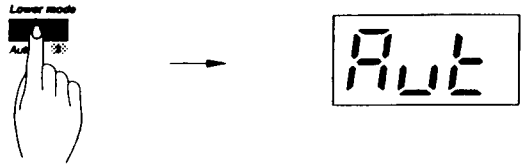
The FS690's Auto-Accompaniment section is one of the most powerful found on any portable keyboard. It has the capability of working in four different "modes". In this Basic Operation section of the manual, however, we will deal only with the first mode called "AUTO 1".

When your FS690 is turned on, it is automatically set to AUTO 1 operation. In AUTO 1 mode, you can play chords with your left hand (which will generate full accompaniment) while playing the melody with your right hand. Let's try the Auto-Accompaniment section in this mode.

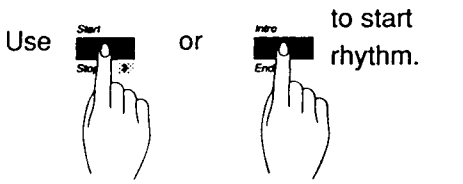
Using Auto-Accompaniment Section: AUTO 1

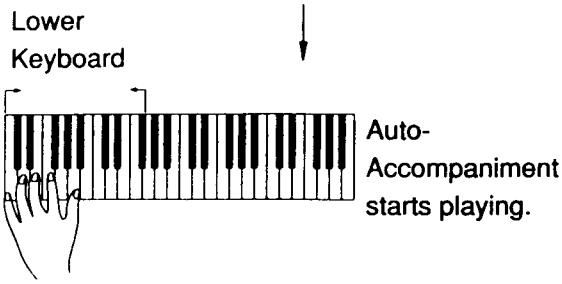


1



2 **3**





This Auto-Accompaniment mode (AUTO 1) allows you to create a realistic ensemble performance by simply pressing and holding left hand chords as you play the melody.

The nineteen keys on the left end of the keyboard (which we call the Lower Keyboard) are used to play the chords which control the Auto-Accompaniment. Up until now we have used the Lower Keyboard as a regular keyboard.

1. First, prepare the Lower keyboard for chord use.

   Find the **Lower mode** buttons and press the **Auto** button. The display will briefly change to read Aut.

2. Start the rhythm.

   Select a rhythm using the **Rhythm** button and the **Selector** buttons. Then, start the rhythm by pressing the **Start/Stop** button or the **Intro/Ending** button.

3. Using the Lower keyboard to activate Auto-Accompaniment.

   Now, try pressing one or more of the keys on the Lower keyboard. You should hear the Auto-Accompaniment begin to play.

   Try using the **Sync./Fill in** button and the **Intro/Ending** button. The tempo of the Auto-Accompaniment can be controlled using the **Tempo** buttons.

   The other three modes of Auto-Accompaniment are discussed in the Advanced Operation section of this manual.

Using ONE FINGER AD-LIB to play like a pro!

By now, we hope you've become very familiar with the Auto-Accompaniment function of the FS690. But you may be wondering what you can do to spice up the melody a bit. Well, the ONE FINGER AD-LIB function is just for you! This feature separates KAWAI keyboards from all others.

1. What is ONE FINGER AD-LIB?

ONE FINGER AD-LIB is a feature which allows anyone, any level of musical ability, to sound like a "pro". With the touch of a finger, you can play hundred of impressive ad-lib melodies with full Auto-Accompaniment and chord progressions. It's great fun!

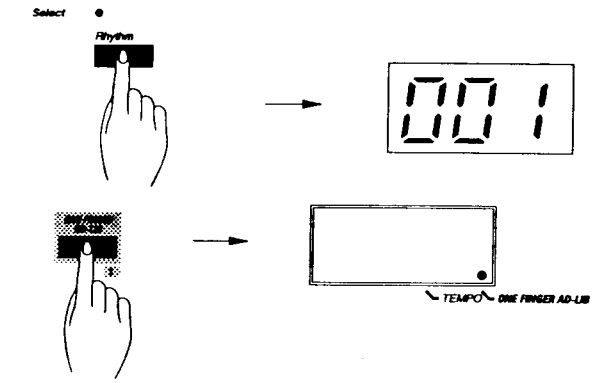
The ONE FINGER AD-LIB phrases are determined by rhythm you select. For example, there are funky ad-lib phrases for rhythm number 07 (SLAP FUNK), and some exciting rock'n roll phrases that go well with number 29 (R&R1). There are seventeen preset ONE FINGER AD-LIB phrases for each of the FS690's one hundred rhythms: a total of 1,700 phrases in all!

2. How does ONE FINGER AD-LIB work?

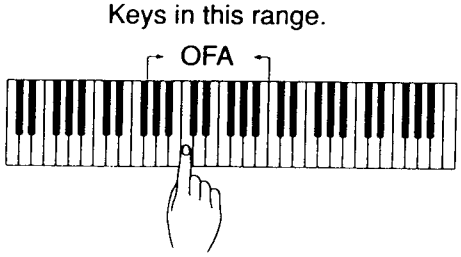
a) Use the **Rhythm** button and the **Selector** buttons to select a rhythm. Next, press the **ONE FINGER AD-LIB** button. The small dot lamp on the lower right side of the display will light up. (See illustration 2-a).

b) Now, press and hold down one of the keys in the ONE FINGER AD-LIB section of the keyboard (shown in the drawing at left). By holding down a single key, you can play an entire ad-lib phrase! Try other ONE FINGER AD-LIB keys. Note that each key plays a different phrase and that some keys use different sounds than other keys.

2-a

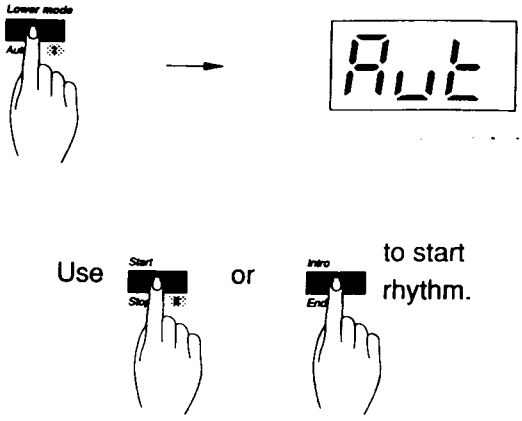


2-b

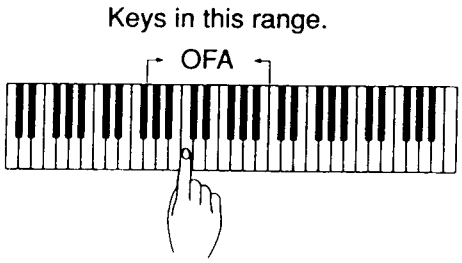


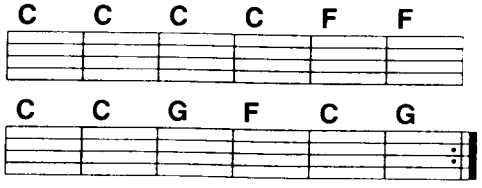
Using ONE FINGER AD-LIB to play like a pro!

2-c



2-d





c) Adding Rhythm and Auto-Accompaniment. Next, press the **Lower mode Auto** button. The display should change briefly to read Aut.

Start the Rhythm using the **Intro/Ending** button or the **Start/Stop** button. The Rhythm and Auto-Accompaniment should begin to play. Listen closely! Notice that the Auto-Accompaniment chords are changing *automatically*. The FS690 has been programmed so that each Rhythm is accompanied by an authentic sounding chord progression that plays *automatically*.

d) Now hold down one of the keys in the ONE FINGER AD-LIB section of keyboard. The ad-lib phrase will play. If you hold the AD-LIB key down, you'll notice that the phrase changes automatically with the chord progression!

e) If you decide that you'd like to change the preset chord progression, play any chord on the Lower Keyboard. This will override the preset progression. Then, the ONE FINGER AD-LIB phrases will change to match your own chords.

f) To return to the preset chord progression, press the **ONE FINGER AD-LIB** button twice.

A note about the ONE FINGER AD-LIB chord progressions.

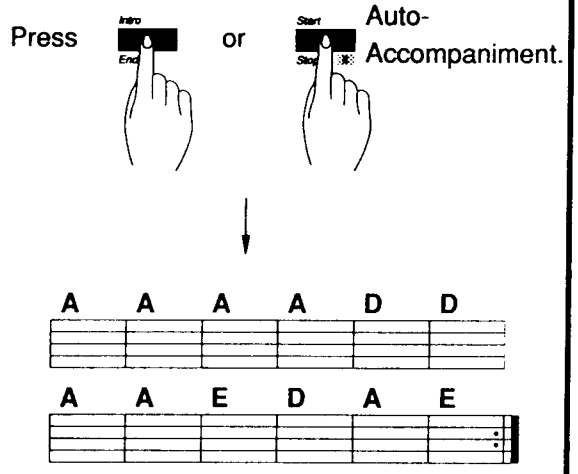
When you start the Auto-Accompaniment with the ONE FINGER AD-LIB function turned ON, the chord progression that plays is in the key of C. For example, the progression for rhythm number 32 (50'S ROCK) is as shown at left.

The next page will describe how you can play ONE FINGER AD-LIB music in a different key.

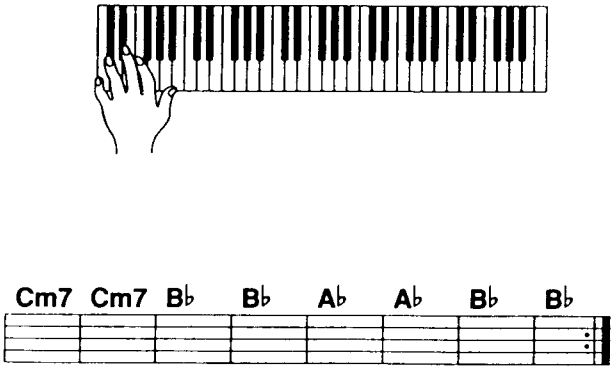
Using ONE FINGER AD-LIB to play like a pro!

1-2

1-3



2-3



Changing Keys

1. Those of you who won't be happy unless the chord progression for 50'S ROCK is in the key of "A" should perform the following operation (after stopping the rhythm for a moment):

   (1) Check that the **ONE FINGER AD-LIB** button and the **Lower mode Auto** button have both been turned ON.

   (2) Before starting the rhythm, press the A key shown in the Illustration 1-2 at left.

   (3) Then press the **Intro/Ending** button or the **Start/Stop** button to start the Rhythm and Auto-Accompaniment. The chord progression should now be in the key of "A" as shown at left.

2. Some of you might be happier if the chord progression for 50'S ROCK were in a minor key. To do this, you can perform an operation like the one described below (again, you should stop the rhythm first):

   (1) Check that the **ONE FINGER AD-LIB** button and the **Lower mode Auto** button have both been turned ON.

   (2) Play a Cm chord as shown in Illustration 2-3 at left.

   (3) Then press the **Intro/Ending** button or the **Start/Stop** button to start the Rhythm and Auto-Accompaniment. The chord progression should now be in the key of "C minor" as shown at left.

There are two ONE FINGER AD-LIB chord progressions for each Rhythm -- one in a major key and one in a minor key. If you would prefer that the chord progression play in the key of Am, just perform that the operation above playing an Am chord instead of the Cm chord we used in the example.

Now select different Rhythms and begin exploring the 1700 ONE FINGER AD-LIB phrases built into the FS690!

Have fun!

Special use of ONE FINGER AD-LIB

We've recorded some special melodies into the FS690 for use with ONE FINGER AD-LIB. These melodies can be found on the ONE FINGER AD-LIB notes associated with Rhythms 91 through 94 (Ballet, Bolero, Campanella, and Nocturne). Here's how to play them:

(1) First, select a rhythm. Let's try #92 (BOLERO).

(2) Next, make sure that the ONE FINGER AD-LIB function is turned on -- and the AUTO function is on.

(3) Press **Start** button to get the rhythm going. You may want to set the "standard tempo" for BOLERO by pressing either of the **Tempo** buttons at this time.

(4) Now, *hold down* the lowest ONE FINGER AD-LIB key (G2). Make sure that your initial hit of the G2 key is *on the main beat* (if you listen to the rhythm for awhile, you'll hear this main beat). Can you hear the first melody notes of BOLERO playing when you hold down G2?

(5) The rest of the melody can be played as you move up the ONE FINGER AD-LIB keys in chromatic fashion (G2, G#2, A2, A#2, etc). Each successive key is programmed with three full beats of the BOLERO melody.

(6) Now, let's try putting the whole melody together. Make sure the BOLERO rhythm is playing. On the *main beat*, hold down the G2 key for three beats. Then, immediately hold down the G#2 key for the next three beats; then the A2 key for the next three beats; and so on, until the entire melody is played. By the time you reach the end of the ONE FINGER AD-LIB region, you should have played BOLERO!

Special use of ONE FINGER AD-LIB

This same process works for Rhythms #91, #93, and #94 with the following changes in the process:

Rhythm #91 (Ballet)

The "Swan Lake" theme used on these notes is based on four-beat phrases. So, hold down each ONE FINGER AD-LIB notes for *four* beats instead of three. Also, the BALLET rhythm requires that you press the G2 key *at the same time* that you press the **Start** button. If you press these at different times, the ONE FINGER AD-LIB melody notes will not match the preset chords.

Rhythm #93 (Campanella)

Campanella is based upon "three-beat" phrases. So, hold down each note for three beats. Do not use the G2 and G#2 notes with this rhythm. Start with the A2 key. Again, the Campanella rhythm requires that you press the A2 key *at the same time* that you press **Start** button.

Rhythm #94 (Nocturne)

Start on G2. Hold each ONE FINGER AD-LIB note for *six* beats, since NOCTURNE is based on six-beat phrases. Press the G2 key at the same time that you press **Start** button.

The Mixer Section

So far, we have covered the basics of the FS690's Rhythm, Auto-Accompaniment, and ONE FINGER AD-LIB functions. This section will show you how to use the Mixer Section.

The volume of each part can be adjusted using the **Volume** buttons. Volumes may be set to any of sixteen levels, which are numbered 0 through 15. The number of each volume setting will appear briefly on the display each time a volume button is pressed.

1. **MASTER VOLUME** buttons
   These buttons control the overall volume of the FS690 which includes the volume of the Rhythm, Auto-Accompaniment, ONE FINGER AD-LIB phrases, and your own manual playing.
2. **Melody volume** buttons
   These buttons control the volume of melody notes only.
3. **Chord volume** buttons
   These buttons control the volume of the Auto-Accompaniment Chords.
4. **Bass volume** buttons
   These buttons control the volume of the Auto-Accompaniment Bass part.
5. **Rhythm volume** buttons
   These buttons control the volume of the Rhythm part.

The mixer section will help you keep the various "parts" of your music in balance with each other.

The next page will show you how to use the mixer section to eliminate any of the four parts – Melody, Chords, Bass, or Rhythm.

The Mixer Section

A

After turning OFF

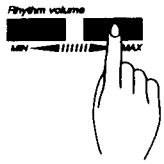
The Volume goes back as before turning OFF, when the left button is pressed.

B

After turning OFF

The Volume goes up from 0, when the right button is pressed.

C



When you press a Volume button. . .

the current volume is displayed.

To eliminate the volume of any part:

Press *both* the left and right **Volume** buttons simultaneously for any one part (Melody, Chords, Bass, or Rhythm) to turn the volume for that part OFF.

When the volume of a part has been turned OFF, you can return it to its original volume by pressing the left-side volume button for that part (see Illustration A).

Pressing the right-side button will raise the volume level, beginning from zero (see Illustration B and C).

* The volume levels controlled by **Volume** buttons can also be controlled by MIDI input, as shown by the following chart: (See page A-30 for the detail)

Melody.....1 ch, 2 ch (N ch, N+1 ch)
volume

Chord.....3 ch (N+2 ch)
volume

Bass.....4 ch (N+3 ch)
volume

Rhythm.....10 ch (D ch)
volume

Using REGISTRATION Memory

What does the REGISTRATION memory do?

Imagine that you want to use a quiet sixteen beat pattern for the majority of your song, but need to switch to another rhythm for the climax. Of course, it would be nice to raise the volume at that time, too. Such variations are not uncommon and add a lot to a song -- but you might find it hard to press all of those buttons! In these types of situations, you will find the REGISTRATION memory: very useful.

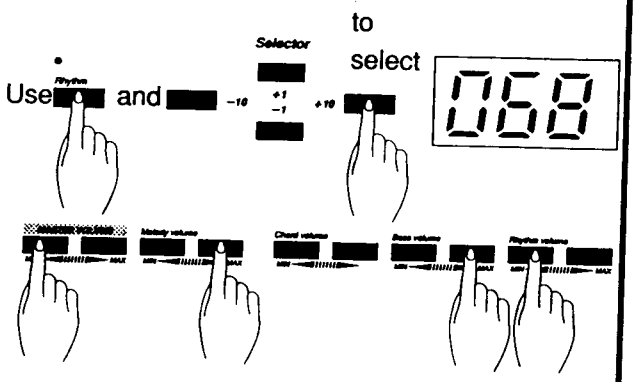
Up to 20 front panel set-ups can be stored in REGISTRATION memory. The following musical elements can be stored in REGISTRATION memory.

1. Volume for each part
2. Sound number to be selected
3. Rhythm number to be selected
4. The "on or off" status of the **Lower mode** buttons
5. The "on or off" status of the **ONE FINGER AD-LIB** button
6. The "on or off" status of the **Effect** buttons
7. TEMPO setting

The next page will show you how to operate the REGISTRATION memory feature.

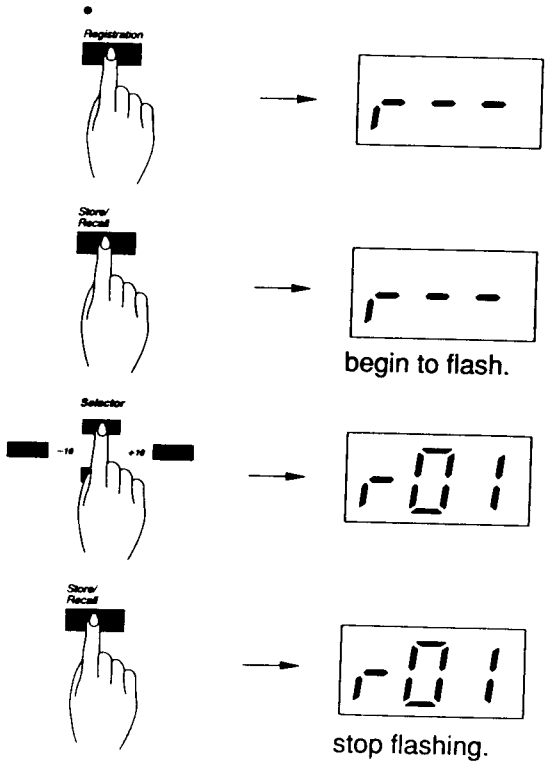
Using REGISTRATION Memory

1



Adjust the volume of each part.

2



Press again.

How to use the REGISTRATION memory:

As an example of the way REGISTRATION memory can be used, we will show you how to set the FS690 so that you can use the Rhythm and Auto-Accompaniment patterns for Tango and Habanera in a single song.

1. Establish your panel setting (REGISTRATION).

   Use the **Rhythm** button and the **Selector** buttons to select rhythm number 68 (TANGO). Start the Auto-Accompaniment, and use the **Volume** buttons to adjust the volume of each part to a level that balances with the others. Also, select the number of the sound which you would like to use for the melody. Now press the **Stop** button to stop the accompaniment before going to step 2.

2. Storing your panel setting in REGISTRATION memory.

   Press the **Registration** button. The lamp above the button will light up and the display should change to read r - -. The "r " stands for REGISTRATION.

   The FS690 can remember twenty settings using the REGISTRATION memory. These settings are given a number from 01 to 20. Press the **Store/Recall** button and the r - - in the display will begin to flash.

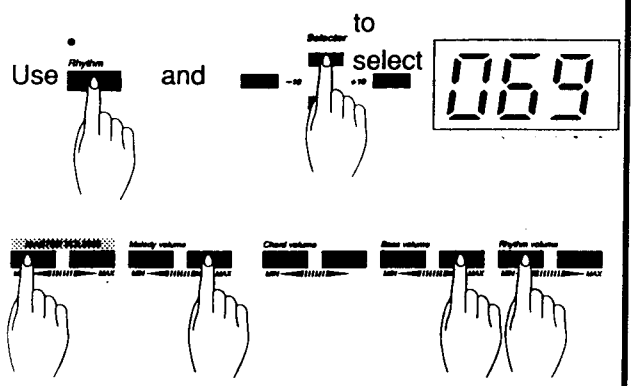
   Now press the **Selector +1** button. The display should change to read r 0 1.

   You are now ready to store the current panel setting to REGISTRATION memory number 01.

   Press the **Store/Recall** button a second time and the display will stop flashing. This means that the rhythm number, sound number, and volume settings that you selected in step **1.** above have been stored as REGISTRATION number 01.

Using REGISTRATION Memory

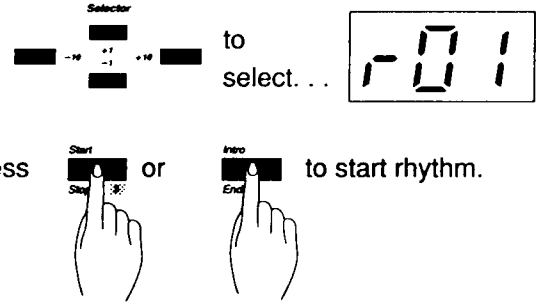
3



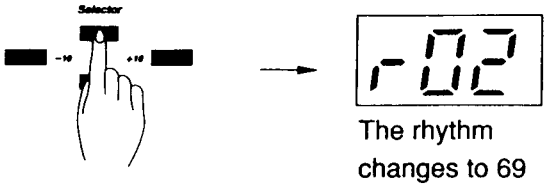
Adjust the volume of each part.

4

After using



5



The rhythm changes to 69 (HABANERA).

3. Storing a second REGISTRATION setting

Next, select rhythm number 69 (HABANERA1). Choose the melody sound number and set the volume of each part as you did in step **1.** Stop the rhythm using the **Stop** button. Then press the **Registraion** button once again. Press the STORE/RECALL button and the r - - in the display will begin to flah. Use the **Selector** buttons to change the display to read r02. Press the **Store/Recall** button once again, and the display will stop flashing. The new rhythm number, sound number, and volume settings that you just selected have been stored as REGISTRATION number 02.

4. Using your REGISTRATION setting in a song.

Now try using the **Selector** buttons to change the display to read r01 once again. Press either the **Start/Stop** button or the **Intro/Ending** button to start the Rhythm pattern.

The rhythm that you hear should be rhythm number 68 (TANGO). When you press one or more of the keys on the Lower keyboard, you will hear the Auto-Accompaniment for that pattern at the volume you set in step **1.** above.

5. Now, while the TANGO rhythm is playing, press the **Selector +1** button. The display should change to read r02, and the HABANERA rhythm should begin to play. The volume levels should be as you set them in step **3.** above.

6. Once you have stored several "set-ups" in the REGISTRATION Memory, you can access then at any time by simply pressing the **Registration** button and using the **Selector** buttons to select the Registration number that you want to use (r01 through r20).

Using the Real-Time RECORDER

To record your performances:

This section will show you how to record the songs you perform using the FS690's RECORDER feature. The RECORDER allows you to record up to three different songs.

Here are the steps:

1. First, set up the FS690 for your performance.

   Begin by selecting the Sound, Rhythm, and Lower Keyboard mode settings that you will require to perform your song. If you want to make changes in Sounds, Rhythm and Auto-Accompaniment patterns, or Volume during your song, you should use the REGISTRATION function.

2. Press the **Rec/end** button. You will hear the sound of the metronome. (If the metronome does not start, see step 7 on the following page).

3. Start playing! Everything you play including ONE FINGER AD-LIB phrases and changes in Sounds or Rhythms, will be recorded ***as you played it.*** That's what we mean by "Real-Time". What you play is what you get.

4. When you are done with your song, press the **Rec/end** button once more. The recording will end, and your song will be recorded as SONG 1.

5. Now let's try playing the song back. Press the **Play/stop** button. The song you just recorded should begin to play. If you would like to stop the performance without listening through to the end, just press the **Play/stop** button once more.

2

Press and the metronome will begin.

4

Press to stop recording.

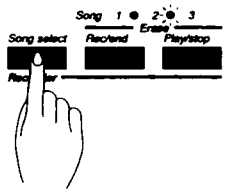
5

Press to start playback.

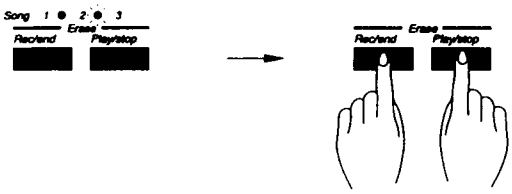
Press to stop playback.

Using the Real-Time RECORDER

6

Press  and the lamp will change.

7



Check to be sure you're erasing the right song before pressing.
(The above illustration shows SONG 2.)

6. Next, if you would like to record a different song, press the **Song select** button. Check that the lamp above the **Play/stop** button changes to indicate SONG 2. Then record your next song using the procedure described on the previous page.
7. If you would like to record over a song which has already been recorded, it is necessary to erase that song first. If, for example, you would like to record over SONG 1, you might try pressing the **Rec/end** button; but you would find that the metronome will not start. (This is to prevent you from accidentally recording over a song which you would like to keep!)

   In order to erase a song, use the **Song select** button to change the lamp so that it indicates the song you want to erase. Then, press the **Rec/end** button and the **Play/stop** button simultaneously. The song will be erased instantly.

   Note:

   When recording songs using the RECORDER, the tempo information will not be recorded. This allows you to record songs at a slow tempo and play them back at a fast tempo.

Congratulations!

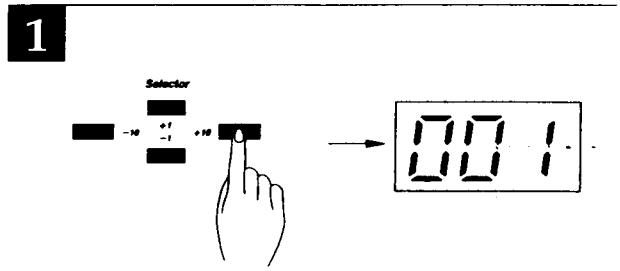
You've finished learning the FS690's Basic Operations.

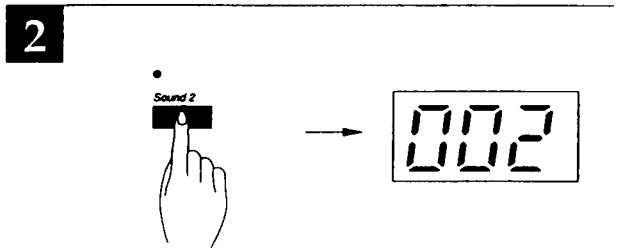
Now have more fun exploring the Advanced Operations section.

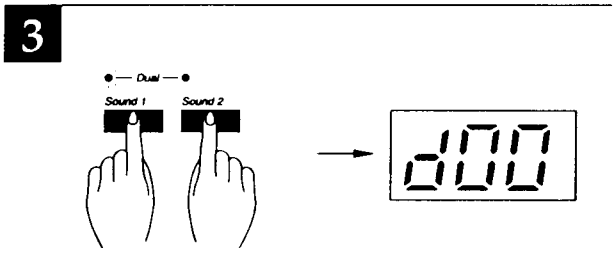
This completes the Basic Operation section of the FS690 instruction manual.
We trust that this first section has given you a good basic knowledge of FS690's powerful features.

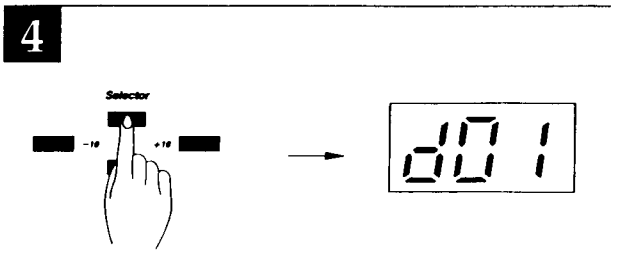
But you've only just begun to explore the full capability of the FS690!
The Advanced Operation section will help you to learn how much more can be done with this powerful instrument.

2. Advanced Operation
Advanced Use of Sounds: Combining Two Sounds









As a first step in this Advanced Operation section, let's try combining two of the sounds listed in the FS690's *"100 SOUND LIBRARY,"* for a rich DUAL sound effect.

1. First, select any sound you like using the **Selector** buttons. As an example, we will choose sound number 01 (PIANO 1).
2. Next, press the **Sound 2** button. The lamp above the button will light up. Now, select another sound. [We will choose number 02 (PIANO 2) for our example.]
3. Now press both the **Sound 1** button and the **Sound 2** button ***simultaneously***. The lamps above these buttons should start blinking and the display should change to read d00.
   If you press one of the keys on the keyboard, you will hear the combination of sounds 01 and 02, PIANO 1 and PIANO 2.

   — What does d00 mean? —

   When two sounds are played at once, varying the pitch of the sounds slightly with respect to each other makes the combined sound much richer. This varying of the pitch of two sounds is called "Detuning." The FS690 allows you to detune two sounds when combining them using the DUAL effect. The "d" in the display therefore stands for "Detune," and the "00" following it represents the difference in pitch between SOUND 1 and SOUND 2.
4. Press the **+1** button one time. The display should change to read d01. Now, when you press a key on the keyboard, you will hear a slightly richer sound. You can use the **Selector** buttons to set a detune value of 00 to 07. The higher the number is, the greater the difference in pitch becomes. When our PIANO 1/PIANO 2 combination is set to a detune value of 07 (d07), the result is a "honkytonk" sounding piano. Using the DUAL effect with 7 levels of detune, you have up to 32,400 different DUAL sound variations available.

Advanced Use of Sounds: Adding Effects

1

Bend down *Bend up*

2

Sustain

3

Stereo chorus

4

Duet

The FS690 has a variety of effects which can add realism or excitement to your selected sound.

1. **Pitch bend:**
   Pitch bend is an effect by which the pitch of a sound is bent smoothly upward or downward. It is useful for copying the sound of a guitar being played with a "Choking" technique. Try pressing the **Bend down** button while holding down one of the keys on the keyboard. The pitch of the sound should bend smoothly down a single step, then return to its original pitch when the **Bend down** button is released. In a similar way, the **Bend up** button bends the pitch of a note smoothly upward a single step.

2. **Sustain:**
   Sustain is an effect which lets notes "SOUND" for a longer duration. Pressing the **Sustain** button activates the effect. Pressing it a second time cancels the effect.

3. **Stereo chorus:**
   Pressing the **Stereo chorus** button activates an effect which adds a deep stereo richness to the currently selected sound. Pressing the button a second time cancels the effect.

4. **Duet:**
   When the **Duet** button is pressed, the FS690 will add a harmonizing note to each melody note that is played on the keyboard, so you can enjoy a duet performance while playing only one melody note at a time. This function is extremely effective when used together with the Auto-Accompaniment function. Pressing the button a second time turns the effect off.

Notes:

1. When you choose the DUAL sound effect, the stereo chorus effect, or the duet effect, the number of notes that can be heard at the same time will be reduced.
2. The DUAL sound effect is not possible when one of the SPLIT sounds, numbered 41 through 50, is chosen as SOUND 1 or SOUND 2.
3. If you press the **Stereo chorus** button while using the DUAL sound effect, the stereo chorus effect will be applied only to the sound selected as SOUND 1.
4. If you press the **Duet** button while using the DUAL sound effect, the harmonizing note will be SOUND 1.

Advanced Use of Auto-Accompaniment Section:

The FS690's Auto-Accompaniment section is one of the most powerful found on any portable keyboard. It has the capability of working in four different modes. In the Basic Operation section, we discussed only the first mode, AUTO 1, which is the standard operational mode for most portable keyboards. In this Advanced Operation section, we will introduce the remaining three modes: AUTO 2, AUTO 3, and AUTO 4.

Having four different Auto-Accompaniment modes allows the FS690 to be enjoyed by people at all levels of musical of musical ability -- from beginners to experienced professionals.

Let's outline the four modes of Auto-Accompaniment offered by the FS690:

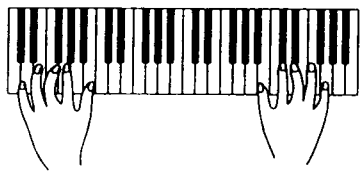
1. **AUTO 1:**
   Lets you play single-finger or fingered chords with your left hand while playing the melody with your right. Your left hand chords trigger the Auto-Accompaniment. For a review of AUTO 1 operation, see the Basic Operation section.
2. **AUTO 2:**
   Lets you play a bass line with your left hand while playing chords and melody with your right. Preset Auto-Accompaniment chords will play -- but are triggered by the chords you play in your ***right hand.***
3. **AUTO 3:**
   Great for the persons who want to sing the melody as they play an Auto-Accompaniment! Like AUTO 2, you can play a bass line with your left hand while playing chords and melody with your right. With AUTO 3, however, the standard Auto-Accompaniment chords do ***not*** play. Rather, the chords you play with your right hand (any chords) become part of the Auto-Accompaniment. AUTO 3 lets you play the FS690 like a piano -- while the bass and Auto-Accompaniment chords follow.
4. **AUTO 4:**
   The mode to use when you're not sure what chords to play. AUTO 4 has a preset chord sequence for each rhythm (the same sequence used with ONE FINGER AD-LIB). You can play through the entire chord sequence by playing successive notes (in order starting with C1) in the Lower keyboard with your left hand.

Let's try using these three new Auto-Accompaniment modes, beginning with AUTO 2.

Note:

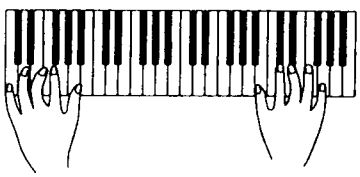
ONE FINGER AD-LIB is not operational when the FS690 is in AUTO 2 or AUTO 3.

1



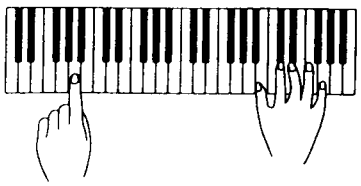
Chords with left hand. Melody with right hand.

2



Bass with left hand. Chords and Melody with right hand.

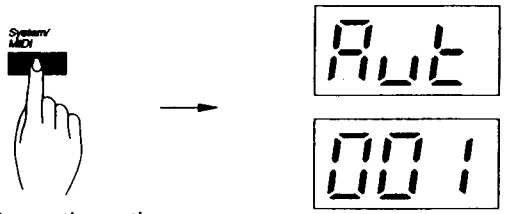
4



Chords with left hand. Melody with right hand.

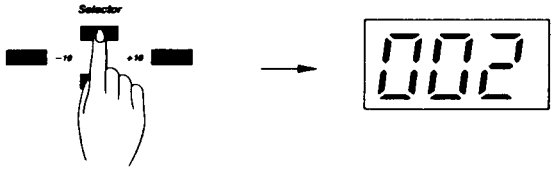
Explanation of AUTO 2

1



Press three times.

2



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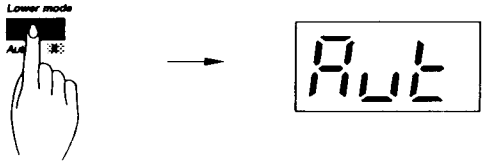

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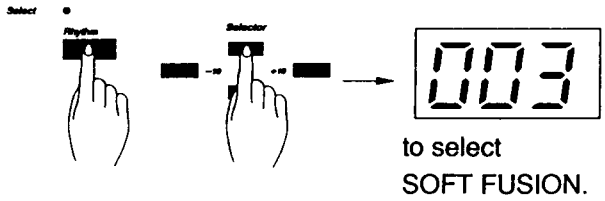
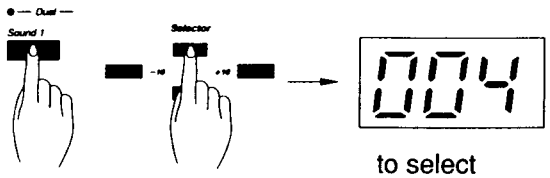
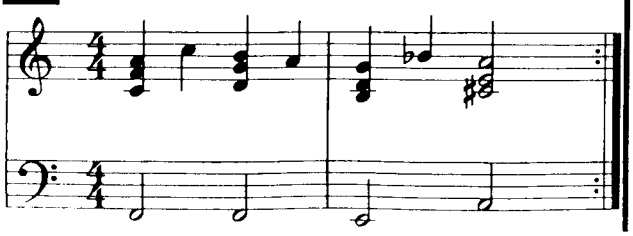


to select SOFT FUSION.



to select E.PIANO.

5

AUTO 2 is an advanced form of Auto-Accompaniment which lets you play a bass line with your left hand while your right hand plays the chords and melody.

How is AUTO 2 different from AUTO 1? In AUTO 1, the Auto-Accompaniment Chords are triggered by the chords you play in your ***left hand***. In AUTO 2, your ***right hand*** notes trigger the Auto-Accompaniment Chords.

- Why is AUTO 2 valuable? There are two primary reasons:

  1. Many people feel more comfortable playing chords with their right hand rather than their left. AUTO 2 suits that playing style better than AUTO 1 does.
  2. If you play the FS690 as you would normally play a piano while using AUTO 2, the preset Auto-Accompaniment chords will follow the chords of your performance.

Let's see how AUTO 2 works:

1. With the rhythm stopped, press the **System/MIDI** button three times. The display should begin to flash alternately between Aut and the number 001. This shows that the Auto-Accompaniment is currently set to AUTO 1.
2. Press the **Selector +1** button to change the number in the display to 002.
3. Press the **Lower mode Auto** button until the display briefly flashes Aut. You may have to press the **Auto** button *more* than once before you actually see Aut appear in the display. It will flash for less than a second as you press the **Auto** button.
4. Select a rhythm using the **Rhythm** button and the **Selector** buttons. This time try Rhythm pattern number 03 (SOFT FUSION). Also, select sound number 04 (E. PIANO 2) using the **Sound 1** button and the **Selector** buttons.
5. Press the **Start/stop** button. The rhythm will start. Try playing the music at left along with the rhythm.

Explanation of AUTO 2

Can you hear how AUTO 2 allows the FS690 to follow your playing?

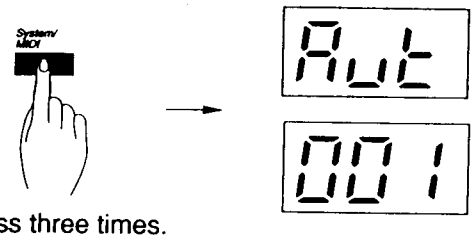
Now let's go on to the next Auto-Accompaniment mode -- AUTO 3.

Note: Here's some playing information about AUTO 2

1. The Auto-Accompaniment changes when you press three or more keys (total) on the Lower or Upper Keyboards. The Auto-Accompaniment chords will not change when you play a chord that FS690 cannot recognize as a chord. see page Ap-1 for a chart of the chords that FS690 can recognize.
2. When you press only one key on the Lower Keyboard, only the Auto-Accompaniment ***bass*** part will change.
3. If you press more than one key on the Lower Keyboard, the bass part will respond to the ***lowest*** key pressed.
4. When only keys on the Upper keyboard are pressed, pressing three or more keys will cause the Auto-Accompaniment to change.
5. When AUTO 2 is activated, neither ONE FINGER AD-LIB nor DUET will function.

Explanation of AUTO 3

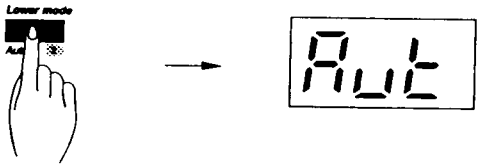
1



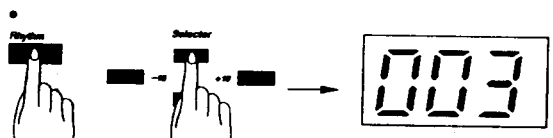
Press three times.

2

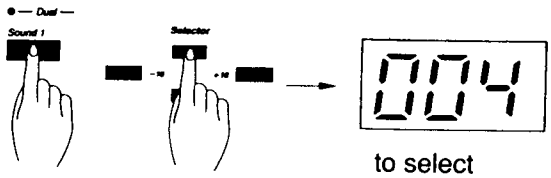
3



4

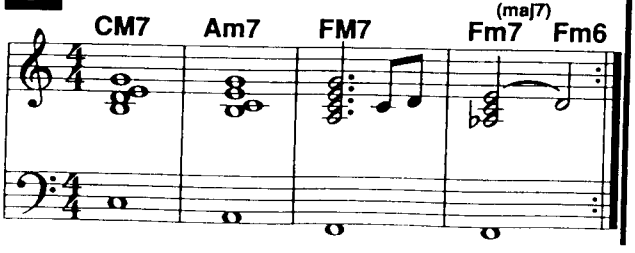


to select
SOFT FUSION.



to select
E.PIANO.

5



The key aspect of AUTO 3 is "freedom in choosing chords."

Like AUTO 2, this third Auto-Accompaniment mode lets you play a bass line with your left hand while you play chords and melody with your right hand. AUTO 3 is different in that the preset Auto-Accompaniment Chords do ***not*** play. Rather, the chords that you play with your right hand actually become ***part of the Auto-Accompaniment***. When you play in normal piano style, everything follows you!

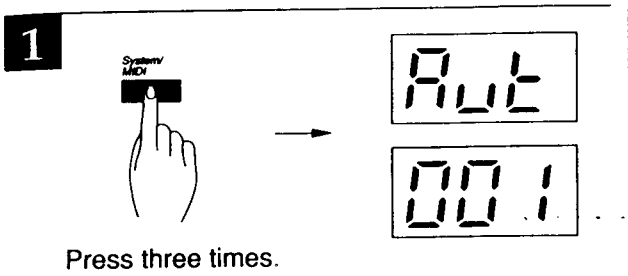
Furthermore, with AUTO 2, you are limited to only the chord forms that the FS690 can play as part of the Auto-Accompaniment. With AUTO 3, ***any*** chord form you play can become part of the Auto-Accompaniment. You have total freedom in using chords.

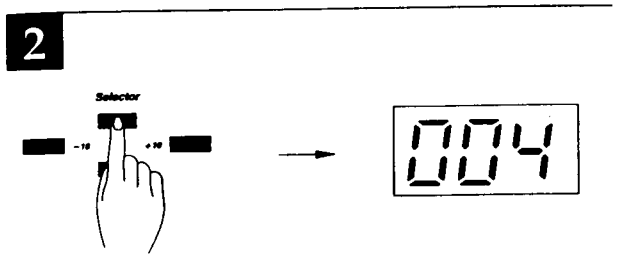
Let's try AUTO 3:

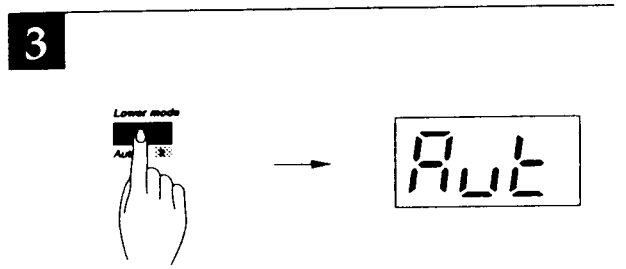
1. With the rhythm stopped, press the **System/MIDI** button three times. The display should begin to flash alternately between "Aut" and the number 001 (or 002).
2. Use the **+1 Selector** button to change the number in the display to 003. This indicates that you have selected AUTO 3.
3. Press the **Lower mode Auto** button until the display briefly flashes "Aut." Again, you may have to press the **Auto** button more than once before you see "Aut" appear in the display.
4. Use the **Rhythm** button and the **Selector** buttons to choose Rhythm number 03 (SOFT FUSION) once again. Also, select sound number 04 (E. PIANO 2) using the **Sound 1** button and the **Selector** buttons. (You may have already selected this panel setting from our AUTO 2 example).
5. Press the **Start/stop** button. The rhythm will start. Try playing the music at left along with the rhythm.
6. Can you hear how the chords you play with the right hand become part of the Auto-Accompaniment? Try playing the music to one of your favorite songs and sing the melody. You'll like the result! Plus, AUTO 3 will allow the FS690 to follow every chord you play.

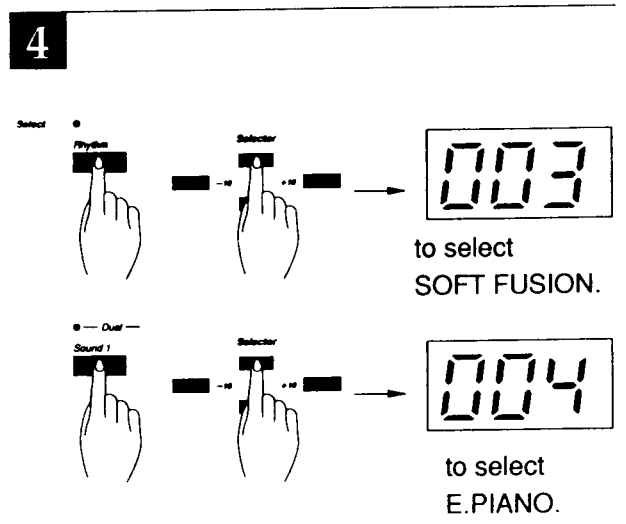
Note: The playing information about AUTO 3 is the same as that of AUTO 2. Please refer to page A – 5.

Explanation of AUTO 4









AUTO 4 is the best Auto-Accompaniment mode when you're not sure what chords to play. The FS690 has a preset chord sequence (the same one used with ONE FINGER AD-LIB) for each of the *100 Rhythms*. You activate the preset sequence by pressing the notes of the Lower Keyboard (beginning with C1) in successive order. Here are the steps:

1. With the rhythm stopped, press the **System/MIDI** button three times. The display should begin to flash alternately between "Aut" and the number 001 (or 002 or 003).
2. Press the **+1 Selector** button to change the number in the display to 004. This indicates that the FS690 is in AUTO 4.
3. Press the **Lower mode Auto** button until the display briefly flashes "Aut".
4. Select Rhythm number 03 (SOFT FUSION) and sound number 04 (E.PIANO 2) as you did in the previous pages.
5. Press the **Sync./Fill in** button. The rhythm will not start until you press a key in the Lower Keyboard.
6. Now, count "ONE. . . TWO. . . THREE. . . FOUR" at the same tempo as the blinking red "Tempo" dot in the display. These are the "Beats" of the Auto-Accompaniment. Starting with the lowest "C" (called C1), hold each note of the Lower keyboard in successive order (C. . . C#. . . D. . . D#) for four beats. You'll hear the chord sequence change as you move up the chromatic scale.

With AUTO 4, you won't have to worry about chords. It lets you concentrate on making great melodies with your right hand.

Introducing Accompaniment Hold

Accompaniment Hold is an exciting new feature from KAWAI that allows you to control the rhythmic placement of Accompaniment Chords while you play. To operate Accompaniment Hold, you'll need to purchase a foot switch (model F-1, sold separately).

- Connect the F-1 foot switch to the Accompaniment Hold jack on the rear panel.
- Whenever you depress the foot switch pedal, the bass drum, open hi hat, bass, and chord will play in unison.
- If you hold the pedal down, the bass and chord sounds will be held until you release the pedal.

When will the Auto-Accompaniment Hold feature be most useful?

1. When you want to add rhythmic variety to your accompaniment by holding some chords and letting others play normally;
2. When you want to add syncopation to an accompaniment;

   and
3. When you want to add accents to an accompaniment.

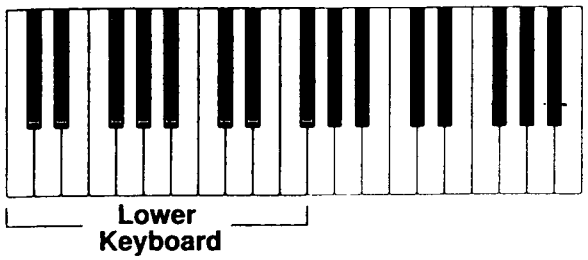
Try Accompaniment Hold with several different Auto-Accompaniments to see how effectively it can add interest and excitement to your performances.

Important:
Before moving on to the next section, press the **System/MIDI** button three times and use the **Selector** buttons to return to AUTO 1.

Note:

The F-1 footswitch can also operate as a "Fill-In" pedal. For details, see Page A-25.

Using Hand Percussion



DRUM Assignment

Key	MIDI Key #	Instrument name
C1	36	Bass Drum
C#1	37	Rim Shot
D1	38	Low Snare
D#1	39	Hi Clap
E1	40	Hi Snare
F1	41	Scratch Low
F#1	42	Hi-hat Close
G1	43	Low Tom
G#1	44	Low Clap
A1	45	Low Conga
A#1	46	Hi-hat Open
B1	47	Mid Tom
C2	48	Hi Conga
C#2	49	Crash Cymbal
D2	50	Hi Tom
D#2	51	Ride Cymbal
E2	52	Low Cymbal
F2	53	Scratch High
F#2	54	Small Cymbal

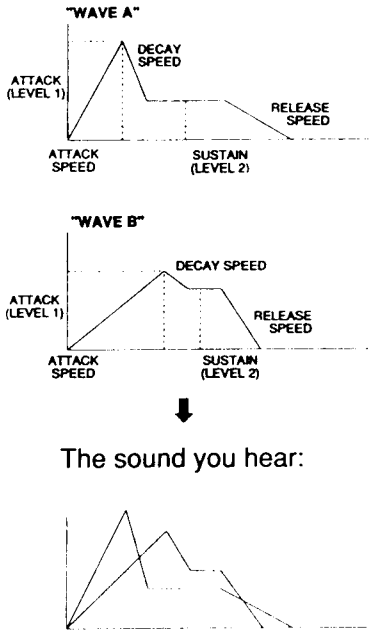
In addition to its use with Auto-Accompaniment, the Lower Keyboard can also be used to play percussion instruments.

First, you must set the lower keyboard to play hand percussion. Press the **Lower mode Drum** button . The letters dru will appear in the display for a brief moment.

Now, when you press one of the keys on the Lower Keyboard, you will hear the sound of the instrument pictured above that key. This feature allows you to enjoy playing simple drum solos in time with the rhythm. Of course, these drum sounds can be played even when the rhythm is turned off. The drum sounds are assigned to the keys on the Lower Keyboard as shown in the chart at left.

Note that if you press the **Lower mode Drum** button once more, the display will briefly change to read nor for Normal, and the Lower Keyboard will function as a Normal Keyboard once again.

Creating Your Own Sounds: the Synthesizer Function



What is the synthesizer function?

The built-in 11-parameter synthesizer allows you to create your own sounds and store them in the FS690's user memory. Before discussing the actual use of the synthesizer, let's take a look at the way the FS690's one hundred sounds are constructed. This information will be very helpful when you start to create your own sounds.

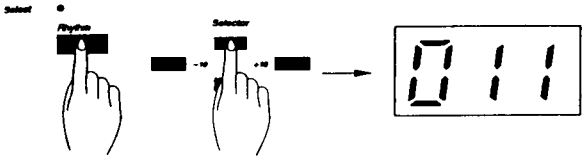
How sound is created on FS690.

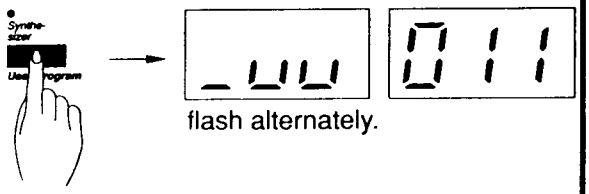
The shape of each sound is determined by a variety of elements called "Parameters". Let's look at how each parameter affects the sound.

1. **WAVE SELECT:**
   Every sound is composed of two waves, WAVE A and WAVE B, both of which are selected by changing the WAVE parameter. Each wave has a "Shape" which determines the character of its sound.
2. **ATTACK (LEVEL 1):**
   This parameter controls the respective attack volume levels of WAVEs A and B.
3. **ATTACK SPEED:**
   This parameter controls the amount of time it takes for WAVEs A and B to reach their peak volume levels after the key is struck. Sounds such as number 87 (VIBES) have a short attack, while sounds such as number 17 (SLOW VIOLIN) have a rather long attack.
4. **DECAY SPEED:**
   This parameter controls the amount of time it takes for WAVEs A and B to change from their respective peak volume levels to their sustain levels (the volume level that will be sustained for as long as the key is held down). Sounds such as number 85 (XYLOPHONE) have a very short decay, whereas sounds like number 01 (PIANO1) have a long decay.
5. **SUSTAIN (LEVEL 2):**
   This parameter controls the volume levels at which WAVEs A and B will be sustained while the key is held down. Sounds such as XYLOPHONE, which disappear even if you hold the key down, generally have SUSTAIN values of zero. The sustain volume of other sounds such as number 31 (JAZZ ORGAN) which continue to play as long as the key is held down can be controlled by changing their SUSTAIN values.
6. **RELEASE SPEED:**
   This parameter controls the amount of time it takes for the sound to disappear after the key is released. Sounds such as number 76 (COSMIC) have a very long release.

The Synthesizer Function: Changing the Parameters

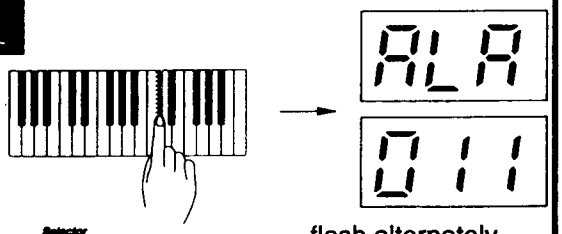
Select parameters using these keys.



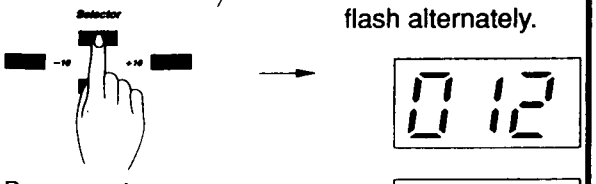


flash alternately.

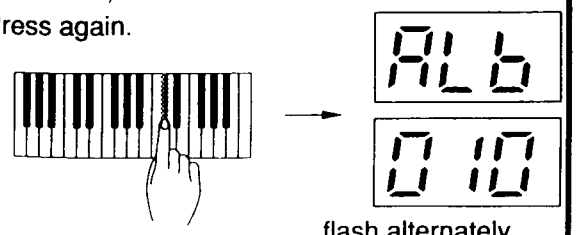
1



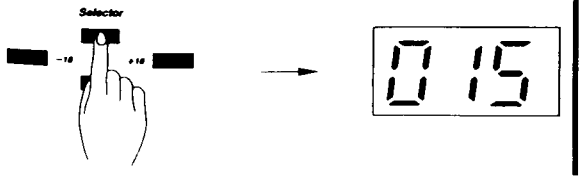
flash alternately.



Press again.



flash alternately.



Now that you can understand the way sound is created on the FS690, let's discuss the method by which you can change parameters to create your own sounds. Parameters are selected using keys C5 through F5 on the right end of the keyboard. Once a parameter has been selected, its value can be changed using the **Selector** buttons.

First, use the **Selector** buttons to select the sound which you would like to modify by changing its parameters. Let's try changing the parameters for sound number 11 (BOW. STRINGS).

We will begin by pressing the **User Program Synthesizer** button. The lamp above this button will light, and the display will begin to flash, alternately reading _UU and 011.

The _UU represents a W, the first letter in WAVE. The number 011 indicates that WAVE combination number 011 has been selected. (Remember that each of the one hundred sounds in the FS690's *"100 SOUND LIBRARY"* is actually a combination of two WAVEs, WAVE A and WAVE B.) The WAVE number can be changed using the **Selector** buttons. (For example, if WAVE combination 100 is selected, the display will flash alternately between _UU and 100.)

1. Changing the ATTACK (LEVEL 1)

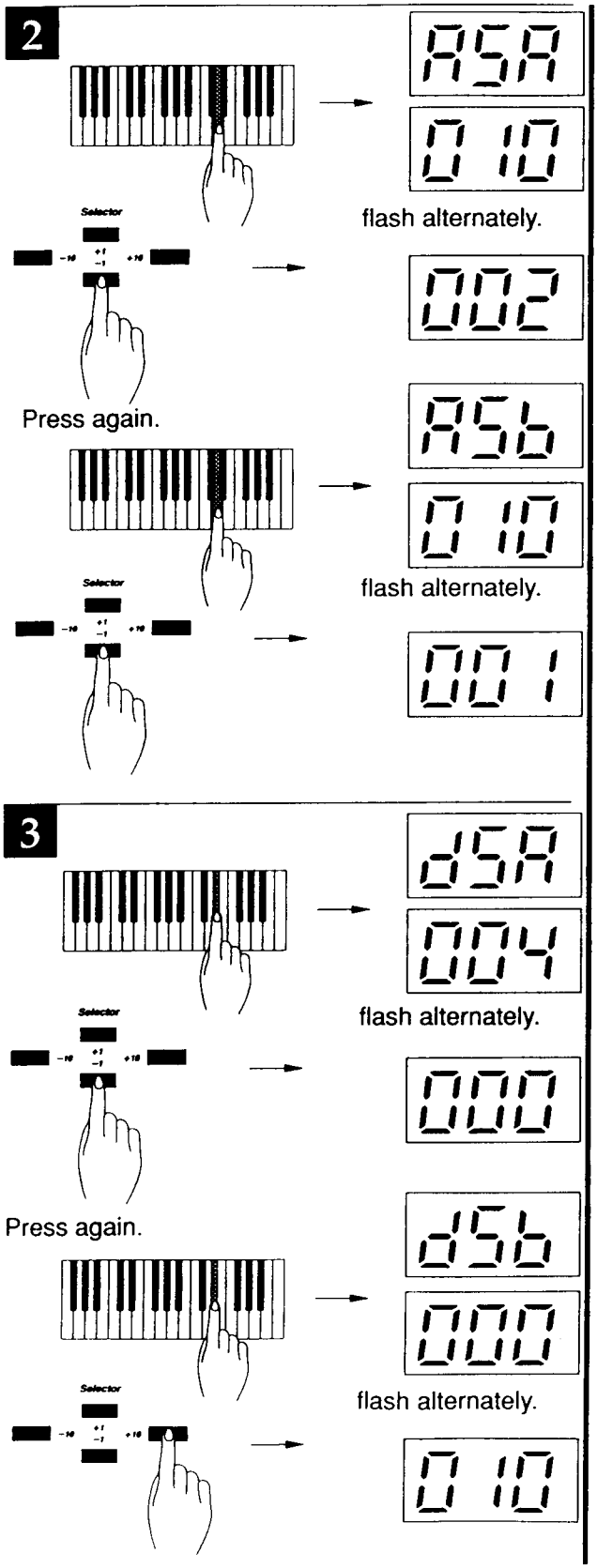
Press the C#5 key. The display should begin to flash alternately between AL A and the number 011. The "AL" in the display stands for "ATTACK LEVEL," and the "A" means that the value shown is the ATTACK LEVEL of WAVE A. Thus, the ATTACK LEVEL of WAVE A is 11. If you press the **Selector +1** button once, the number shown by the display should change to read 012.

Next, try pressing the C#5 key once again. The display should begin to flash alternately between AL b and the number 010. Again, the "AL" in the display stands for "ATTACK LEVEL" and the "b" is a lower case letter "B" indicating WAVE B. This indicates that the ATTACK LEVEL of WAVE B is 10. Use the **Selector +1** button to change the number to 015.

You have now made WAVE B (at 015) louder than WAVE A (at 012).

Advanced Operation

The Synthesizer Function: Changing the Parameters



2. Changing the ATTACK SPEED

Press the D5 key. The display should begin to flash alternately between A5A and the number 0 10. The "A5" in the display stands for "ATTACK SPEED," and the second "A" means that the value shown is the ATTACK SPEED of WAVE A. Thus, the ATTACK SPEED of WAVE A is 10. Use the **Selector -1** button to change the number to 002.

Next, try pressing the D5 key once again. The display should begin to flash alternately between A5b and the number 0 10. This indicates that the ATTACK SPEED of WAVE B is 10. Use the **Selector -1** button to change the number to 001.

Try playing a lower key on the FS690 (away from the User Program section). You'll hear that the BOW. STRINGS sound now has a much slower attack than it did previously.

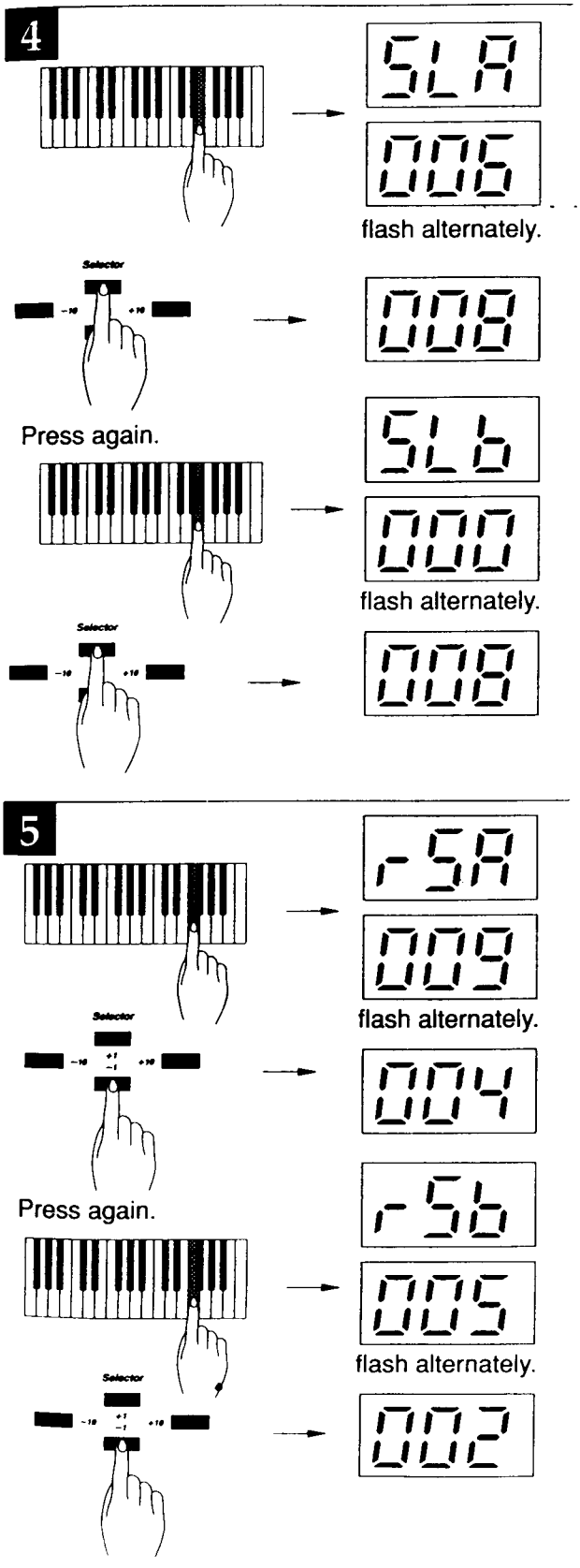
3. Changing the DECAY SPEED

Press the D#5 key. The display should begin to flash alternately between d5A and the number 004. The "d5" in the display stands for "DECAY SPEED," and the "A" means that the value shown is the DECAY SPEED of WAVE A. Thus, the DECAY SPEED of WAVE A is 4. Use the **Selector -1** button to change the number to 000.

Next, try pressing the D#5 key once again. The display should begin to flash alternately between d5b and the number 000. This indicates that the DECAY SPEED of WAVE B is 0. Use the **Selector +10** button to change the number to 0 10.

Hold down one of the FS690's lower keys (away from the User Program section). After holding for about one second, you'll hear WAVE B drop suddenly in volume. That's because you have assigned it a faster DECAY speed than WAVE A.

The Synthesizer Function: Changing the Parameters



4. Changing the SUSTAIN (LEVEL 2)

Press the E5 key. The display should begin to flash alternately between SLA and the number 006. The "SL" in the display stands for "SUSTAIN LEVEL," and the "A" means that the value shown is the SUSTAIN LEVEL of WAVE A. Thus, the SUSTAIN LEVEL of WAVE A is 6. Use the **Selector +1** button to change the number to 008.

Next, try pressing the E5 key once again. The display should begin to flash alternately between SLb and the number 000. This indicates that the SUSTAIN LEVEL of WAVE B is 0. Use the **Selector +1** button to change the number to 008.

Hold a lower key once again. After about one second, you'll notice that the volume of WAVE B drops suddenly --- but not as low as WAVE A's volume level.

5. Changing the RELEASE SPEED

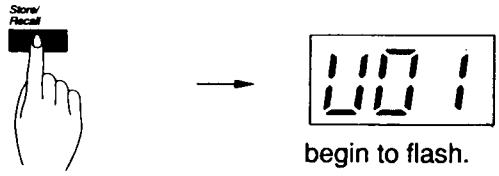
Press the F5 key. The display should begin to flash alternately between rSA and the number 009. The "rS" in the display stands for "RELEASE SPEED," and the "A" means that the value shown is the RELEASE SPEED of WAVE A. Thus, the RELEASE SPEED of WAVE A is 09. Use the **Selector -1** button to change the number to 004.

Next, try pressing the F5 key once again. The display should begin to flash alternately between rSb and the number 005. This indicates that the RELEASE SPEED of WAVE B is 05. Use the **Selector -1** button to change the number to 002.

Now, try pressing one of the lower keys on the keyboard. The sound that you now hear is quite different from the original sound, BOW. STRINGS. By changing the RELEASE SPEED parameter, you have lengthened the sound so that it continues to play after the key is released. Let's save this new sound using the procedure described on the next page.

The Synthesizer Function: Storing Your New Sound

1



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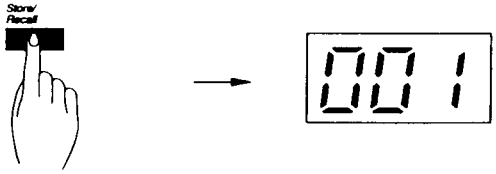


Storing sounds

Now you're ready to store your newly created sound in the FS690's user memory.

1. Press the **Store/Recall** button. The display should change to read U0 1.

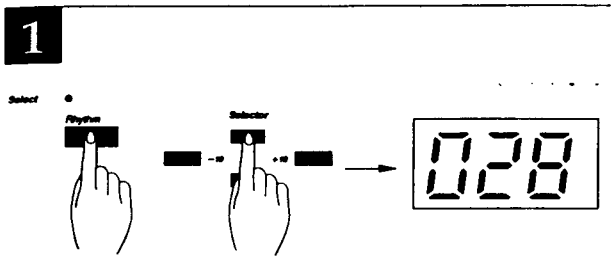
   It is possible to store up to five sounds created using the synthesizer function. Those five sounds will be stored as sounds 96 through 100, which are listed as USER 1 through USER 5 in the *"100 SOUND LIBRARY"* on the FS690's front panel. Therefore, the number "U0 1" in the display indicates that USER 1 has been selected. You can use the **Selector +1** button to change this number to any value between 1 and 5. Let's leave it at 1 for now.

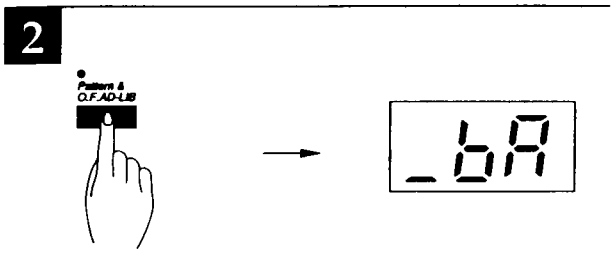
2. Press the **Store/Recall** button one more time. The sound you just created will be stored as sound number 96 (USER 1). Try using the **Selector** buttons to select this sound. When you press a key, you should hear the sound you just created.

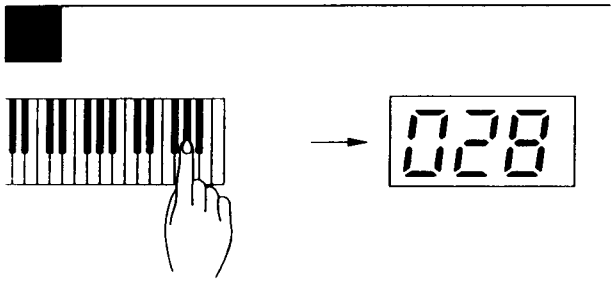
Note:

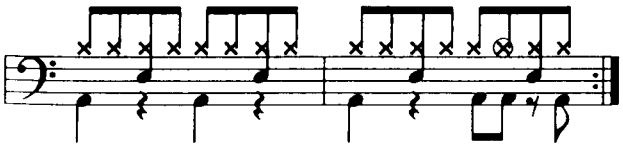
If, while you're creating a sound using the synthesizer function, you should happen to press a key which activates one of the FS690's other functions, the FS690 will leave the synthesizer mode and return to its normal performance mode. Did you forget to store the sound you were creating? There's no need to worry. You can simply press the **Store/Recall** button to return to the synthesizer mode. (This is known as the "Recall" function.)

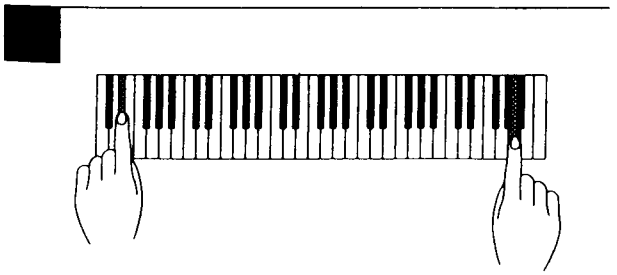
Pattern Maker: Creating Rhythm and Auto-Accompaniment Patterns











Have you ever wished you could take your own musical ideas and put together a dynamite Auto-Accompaniment pattern of your own? With the FS690, you can!

Using the programming functions of the FS690, it is possible for you to create Intro, Fill-in, Ending, and Basic patterns for each of the FS690's Auto-Accompaniment parts: rhythm, bass, and chords. You can build these patterns from scratch, or you can alter one or more elements (chord, bass, drums) of a preset pattern. This is an extremely powerful feature that offers you tremendous creative freedom!
As an example, let's try making a few changes to Rhythm number 28 (POP ROCK) to develop a new pattern.

1. Use the **Rhythm** button and the **Selector** buttons to select the POP ROCK pattern (number 28).
2. Let's begin by changing the Basic pattern.

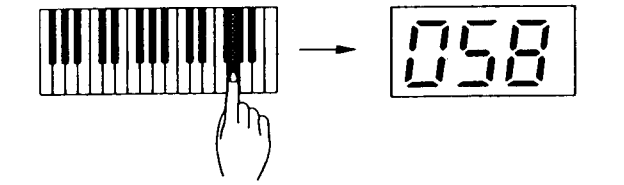
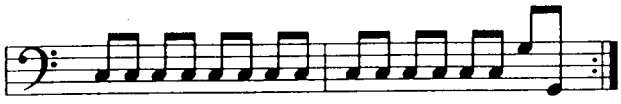
   With the rhythm turned OFF, press the **User Program Pattern & O.F. AD-LIB** button. The lamp above that button will light up, and the display will change to read _bA, which is short for "Basic." This indicates that the Basic pattern has been selected.

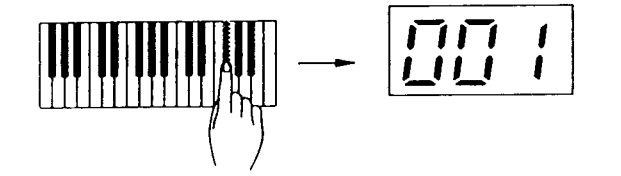
- **First, let's change the Rhythm pattern**
  Find the USER PROGRAM keys at the right end of the keyboard which are identified by PATTERN MAKER above the keys (F#5 to A5). These are the USER PROGRAM keys for changing accompaniments. Press the G#5 key (labelled "Rhythm Clear"). The display should change to show the number of the POP ROCK pattern (that is, number 28).

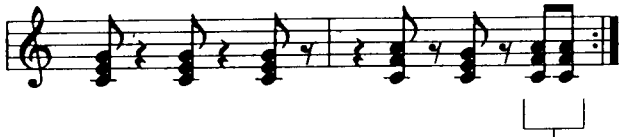
  The basic Rhythm pattern for the POP ROCK pattern is at left:

  Let's try adding the high clap sound on top of the snare drum. Just press the D#1 key, which controls the high clap sound, in time with the snare drum (on beats 2 and 4).
  Feel free to add other rhythm sounds as you like.
  If you make a mistake with one sound for example, (high clap), use the RHYTHM ERASE key (A5) to remove the mistake. Hold down the RHYTHM ERASE key (A5) while you press the "high clap" key (D#1). All high clap sounds will be instantly erased.

Pattern Maker: Creating Basic Patterns







Notes to add.

- **Next, let's change the Bass part**
  If you're finished with the Rhythm pattern, let's move on to the bass pattern. Press the G5 key (labelled "BASS CLEAR") on the keyboard *twice* (see note at bottom of page). The bass pattern should disappear, and the display will change to show the number 058. This indicates that sound number 58 (E. BASS) is the sound being used for the bass part in this pattern.

  Let's create a bass part like the one given at left. Use the keys from C1 to B4 to input the bass part. If you want to use a sound other than E. BASS for the bass part, select the sound you prefer using the **Selector** buttons to change the sound number shown in the display. You should also use the **Bass volume** buttons to set the volume of the bass part at this time.

- **Last, let's change the Chord part**
  Press the F#5 key (labelled "Chord Clear"). The number 001 should appear in the display. This indicates that sound number 01 (PIANO 1) is being used for the Chord part.

  The basic Chord part for the POP ROCK pattern is as shown at left. Let's try adding the eighth notes shown at left to the last beat of the second measure. Use the keys from C1 to B4 to input the Chord part. If you want to use a sound other than PIANO 1 for the Chord part, select the sound you want using the **Selector** buttons to change the sound number shown in the display. You should also use the **Chord volum**buttons to set the volume of the Chord part at this time.

  - Thus far, we have changed each of the elements (rhythm, bass, chord) of the POP ROCK Basic pattern --- but we have not yet stored the revised pattern in the FS690's user memory. Before we cover the procedure for storing, let's change the Fill-in and Intro/Ending patterns as well.

Important:

As you've probably observed by now, pressing the USER PROGRAM PATTERN MAKER keys (F#5, G5, G#5) *once* lets you ***add*** to that portion of the existing pattern. Pressing the same key a *second* time ***erases*** that portion of the pattern allowing you to rebuild it from scratch.

Pattern Maker: Creating Fill-in and Intro/Ending Patterns

Fill in and Intro/Ending patterns can also be changed using the same procedure that you used to change the Basic pattern in the previous page.

1. Let's try changing the Fill-in pattern.

With Rhythm #28 (POP ROCKS) still selected, press the **Sync./Fill in** button. You should hear the POP ROCK Fill-in pattern. Try to change this Fill-in pattern to suit your taste using the same procedure that you used to change the Basic pattern.

2. Last, let's change the Intro and Ending patterns.

If you press the **Intro/Ending** button, you will hear the POP ROCK Intro pattern. Press it once more and you will hear the Ending patterns. Go ahead and edit these patterns as you like using the same procedure as before.

Notes:

1. The tempo you use when creating Auto-Accompaniment patterns will not be memorized! When creating difficult patterns, feel free to slow down the tempo for input, then speed it up again when performing.
2. The same bass and chord sounds will be used for all four pattern types (Basic, Intro, Fill-in, and Ending) of a single Auto-Accompaniment pattern. The last sounds you choose for the Bass and Chord parts are the ones that will be memorized when you store the pattern. For example, if you had chosen E. BASS for the bass part sound when creating the Basic pattern, but later changed it to A. BASS when creating the Ending pattern, then A. BASS will be memorized as the bass part sound for all four of the patterns. Note also that the SPLIT sounds, those numbered 41 through 50, cannot be chosen as the Bass or Chord part sounds.

1

→ The Fill-in pattern plays.

2

Press once. . .

→ . . .and the Intro pattern plays.

Press again. . .

→ . . .and the Ending pattern plays.

Pattern Maker: Creating Fill-in and Intro/Ending Patterns

3

3. If you incorrectly enter one or more notes while creating any part of the Auto-Accompaniment pattern, just press the CLEAR key for that part and all of the notes that you input will be erased. (For example, if you press the F#5 key while creating the bass part for a pattern, the entire bass line will disappear.) You can use the RHYTHM ERASE key to remove individual rhythm sounds from a Rhythm pattern. (For example, to remove *only* the closed hi-hat sound from a Rhythm part, hold down the A5 key and press the F#1 key, which controls the closed hi-hat sound. That sound will be removed from the Rhythm pattern.)
4. As mentioned in an earlier note, the CLEAR key for each part operates in two ways. When pressed ***once***, the original pattern for that part remains unchanged and you can actually ***add*** notes to the part. When you press the CLEAR key a second time, all the notes for that part will be erased --- allowing you to build an entirely new part from scratch. If you want to change the original pattern to something entirely different, however, press the CLEAR key two times to erase the entire part.

Pattern Maker: Storing Your New Patterns

Now that we've create an entirely new pattern, let's store it in the FS690's user memory using the following procedure:

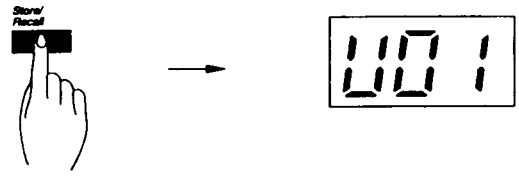
Storing patterns

1. With your new pattern set just the way you want it, press the **Store/Recall** button. The display should change to read U0 1.

   It is possible to store up to five patterns which you create. Those five patterns will be stored as patterns 96 through 100, which are listed as USER 1 through USER 5 in the *"100 RHYTHMS"* on the FS690's front panel. Therefore, the number "U0 1" in the display indicates that USER 1 has been selected. You can use the **Selector +1** button to change this number to any value between 1 and 5. Let's store our pattern as number 1 this time.

2. Press the **Store/Recall** button one more time. The pattern you just created will be stored as pattern number 96 (USER 1). Try using the **Rhythm** button and the **Selector** buttons to select this pattern. Now, when you press a note in the Lower Keyboard with Auto-Accompariment on, you should hear the pattern you just created.

1



2

Press again.

Programmable ONE FINGER AD-LIB: Creating Phrases

With the FS690's new programmable ONE FINGER AD-LIB capability, you have the power to create up to 85 different ONE FINGER AD-LIB phrases of your own. Here's how:

1. Begin by choosing a rhythm using the **Rhythm** button and the **Selector** buttons.

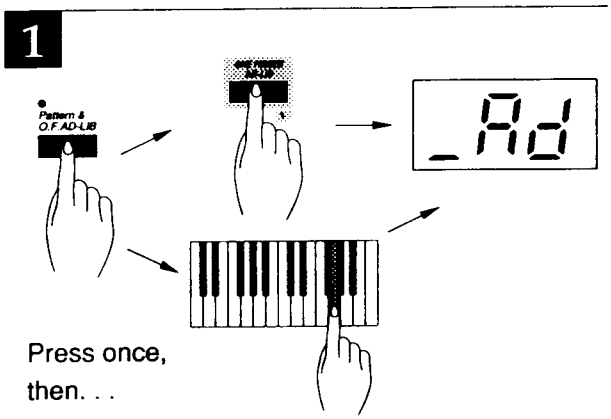
   Then, press the **Pattern & O.F. AD-LIB** button. The lamp above that button will light up. Next, press the **ONE FINGER AD-LIB** button. The letters _Ad, which are short for "Ad-lib," will appear in the display.

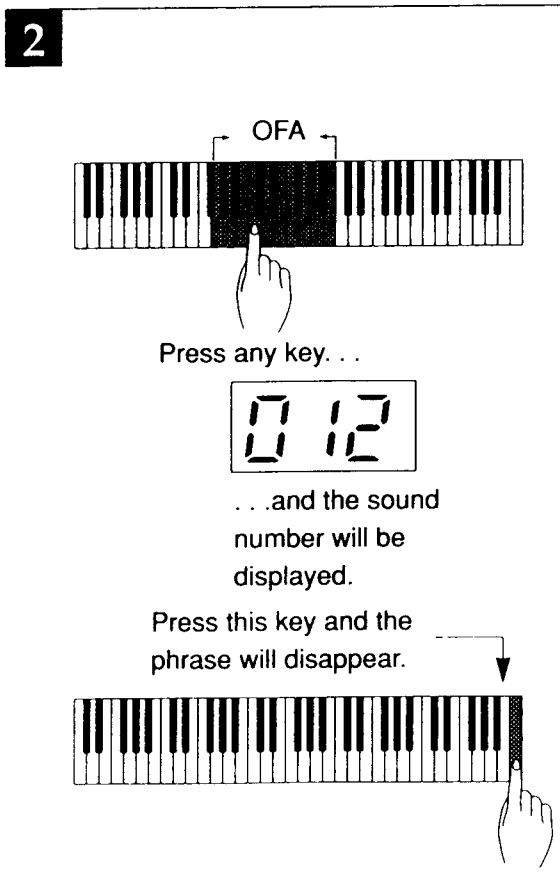
   The Ad-lib phrase for the G2 key should also begin to play.

2. Select the phrase which you want to modify by pressing the key for that phrase in the ONE FINGER AD-LIB section of the keyboard.

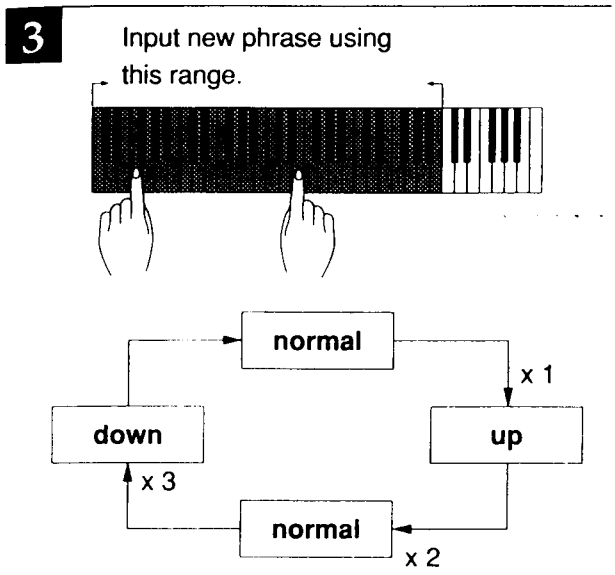
   The Ad-lib phrase you've selected will begin to play.

   The sound number for that phrase will be shown in the display. When you're ready to erase the phrase you've selected, press the C6 key (PHRASE CLEAR) and that phrase will disappear.





Programmable ONE FINGER AD-LIB: Creating Phrases



3. Inputting the new phrase.

   Use the keys from C1 to B4 to input the new phrase.

   If you find that this range isn't high or low enough to play the Ad-lib phrase you have in mind, press the B5 (OCTAVE SHIFT) key. This key can be used to shift the range played by the keys from C1 to B4 up or down an octave, as shown in the diagram left.

   Pressing the OCTAVE SHIFT key one time causes the keyboard to shift ***up*** one octave. Pressing a second time restores the keyboard to the normal pitch.
   Pressing the OCTAVE SHIFT key a third time causes the keyboard to shift ***down*** one octave. Pressing a fourth time restores the keyboard to the normal pitch.

   You can also use the **Melody volume** buttons to set the volume of the Ad-lib phrase which will be memorized when you store the phrase.

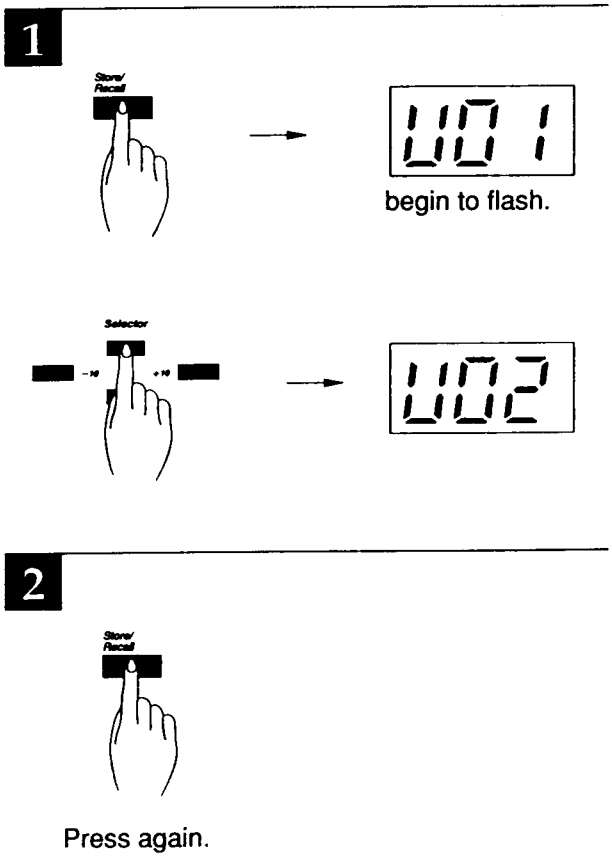
4. Inputting additional Ad-Lib phrases.

   Suppose you want to input a second Ad-Lib phrase. To do this, make sure that your first customized Ad-Lib phrase (from Step 3 above) is finished. Now, press the POINT SELECT key (A# 5). This tells the FS690 that you are done with the current phrase.

   Now, repeat Steps 2 and 3 above to input a new Ad-Lib phrase. When you are done with this second phrase, press the POINT SELECT key again. You can continue this process until all 17 Ad-Lib keys have been programmed with your own customized phrases.

   The next section will show you how to store your newly created AD-LIB phrases.

Programmable ONE FINGER AD-LIB: Storing Phrases



Now use the **Selector** buttons to select a voice for the phrase. The length of a ONE FINGER AD-LIB phrase is limited to one measure. You can change any number of ONE FINGER AD-LIB phrases for a given rhythm --- up to seventeen for each Rhythm pattern. When you're finished changing the phrases, you can store them for future use using the procedure below.

Storing ONE FINGER AD-LIB phrases

1. Press the **Store/Recall** button. The display should change to read U0 1.

   The ONE FINGER AD-LIB phrases you create must be stored ***with*** the Rhythm patterns that accompany them. (Therefore, if you also want to change the rhythm pattern, you should refer to the Pattern Maker section and change the Rhythm now before showing the new phrases).

   It is possible to store up to five patterns (and their accompanying ONE FINGER AD-LIB phrases) which you create. Those five patterns will be stored as patterns 96 through 100, which are listed as USER 1 through USER 5 in the "*100 RHYTHMS*" on the FS690's front panel. Therefore, the number "U0 1" in the display indicates that USER 1 has been selected. You can use the **Selector +1** button to change this number to any value between 1 and 5. Let's store our new pattern as number 2.

2. Press the **Store/Recall** button one more time. The pattern (with the new ONE FINGER AD-LIB phrases you just created) will be stored as pattern number 97 (USER 2). Try using the **Rhythm** button and the **Selector** buttons to select this pattern. Make sure that the **ONE FINGER AD-LIB** button and the **Lower mode Auto** button are in the ON position. Press **Start/Stop** button. When you press the ONE FINGER AD-LIB key on which you created the new phrase, you should hear your newly created phrase.

Programmable ONE FINGER AD-LIB: Storing Phrases

Notes:

1. The patterns listed as USER 1 through USER 5 in the *"100 RHYTHMS"* section are used for storing ***both*** the Auto-Accompaniment patterns and the ONE FINGER AD-LIB phrases that you create. Therefore, if you had saved the Ad-lib phrases created above as USER 1, the modified version of the POP ROCK rhythm pattern (which you created and stored as USER 1 previously) would be erased, and the Auto-Accompaniment rhythm pattern you selected in order to create the Ad-lib phrases would take its place. If you would like to create ONE FINGER AD-LIB phrases to go with a rhythm of your own invention, then you should edit and store the rhythm in advance on one of the user memories. Then, select this user rhythm when you are ready to create the Ad-lib phrases.
2. It is possible to input up to about 300 notes for a single Auto-Accompaniment pattern (combined total for Basic, Intro, Fill in, Intro and Ending patterns), and up to about 270 notes for all the ONE FINGER AD-LIB phrases for a single pattern (combined total for seventeen phrases).
3. If, while you're creating Auto-Accompaniment patterns or Ad-lib phrases using the functions described above, you should happen to press a key which activates one of the FS690's other functions, the FS690 will return to its normal performance mode. If you haven't stored the patterns or phrases you're working on yet, there's no need to worry. You can press the **Store/Recall** button to resume the creation of Auto-Accompaniment patterns and Ad-lib phrases. (This is known as the "Recall" function.)

Using the SYSTEM Functions: Tuning Control

In this section we will outline the FS690's SYSTEM functions (which are concerned with the overall control of the FS690).

SYSTEM functions

The SYSTEM functions include:

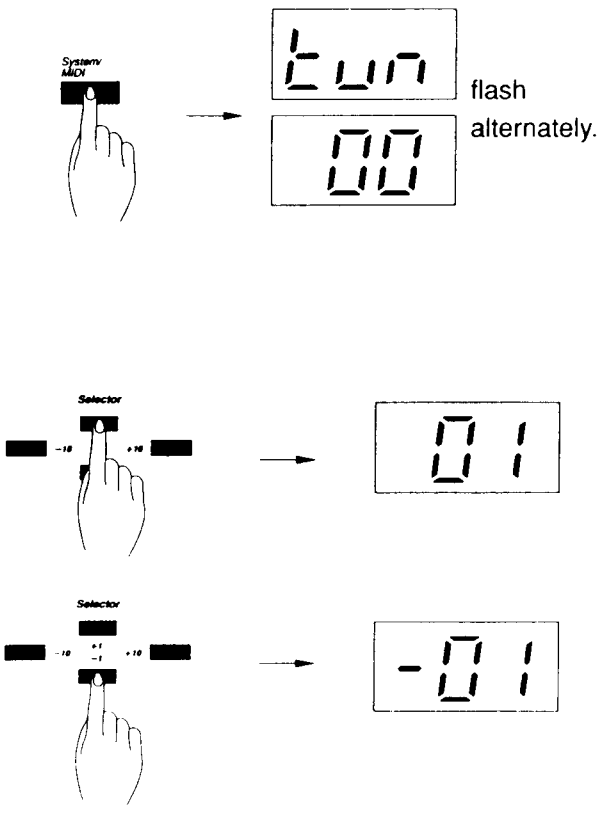
1. TUNING CONTROL (pitch adjustment)
2. TRANSPOSE (key change)
3. Accompaniment Hold Pedal function selection
4. Selecting among the four types of Auto-Accompaniment. (Please see the section on "Advanced Use of Auto-Accompaniment Section" in page A-3.)

1. TUNING CONTROL

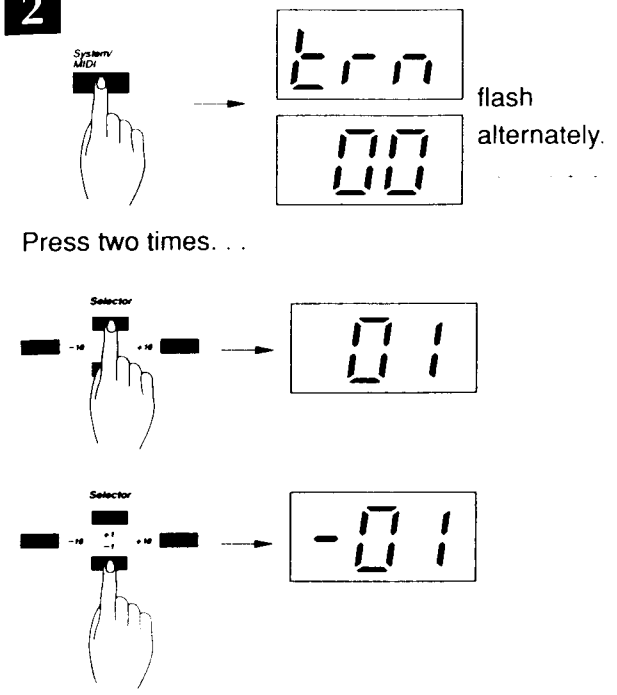
Press the **System/MIDI** button once. The display should begin to flash, alternately showing the letters tun (short for TUNE) and the number 00.

If you press the **Selector +1** button once, the number in the display will change to read 01 and the pitch will raise slightly. If you press the **-1** button instead, the number will change to -01 and the pitch will drop. You can use the TUNE function to adjust the FS690's pitch within a range of -08 to 07.

1



Transpose and Accompaniment Hold Pedal



2. **TRANSPOSE**

Press the **System/MIDI** button twice. The display will begin to flash, alternately showing the letters trn (short for TRANSPOSE) and the number 00.

If you press the **Selector +1** button, the number in the display will change to read 01 and the pitch will raise by a half step. If you press the **-1** button instead, the number will change to -01 and the pitch will drop by a half step. You can use the TRANSPOSE function to adjust the FS690's pitch by a full octave upward or downward (that is, from -12 half steps to +12 half steps).

3. **Accompaniment Hold Pedal function select**

Press the **System/MIDI** button four times. The display will begin to flash, alternately reading PEd and ACC. The ACC stands for Accompaniment. PEd lets you know that the Accompaniment Hold pedal, when depressed, will control the Accompaniment Hold function. If you press the **Selector +10** button, the display should begin to flash, alternately reading PEd and FIL. The FIL stands for Fill in. Now, when the Accompaniment Hold pedal is depressed it will operate the in the same manner as the **Sync./Fill in** button. This lets you insert Fill in patterns without your fingers ever leaving the keyboard. Fill in patterns are activated when you depress the pedal. To return the Accompaniment Hold pedal to its normal function, press the **System/MIDI** button four times, then press the **Selector -10** button.

Using the MIDI Functions:
Connecting the FS690 to another MIDI implements

MIDI functions

In this section we will outline the FS690's MIDI functions (which allow you to connect the FS690 to other MIDI instruments).

Upon seeing the word "MIDI," many people may think: "This section has nothing to do with me!" or "MIDI is too difficult to bother with!" However, if you try using the FS690's MIDI functions, you're sure to find that MIDI is a fun and useful tool for making music.
The FS690 is loaded with MIDI functions – if you don't use them, you're missing out on a lot of the fun the FS690 has to offer!
However packed the FS690 may be with exciting MIDI functions, they are not much use if the FS690 is the only instrument you're using. These MIDI functions are used to connect the FS690 to other MIDI equipment. In this section we will give you some examples of how this is done.

■ Connecting the FS690 to another MIDI keyboard or tone generator module

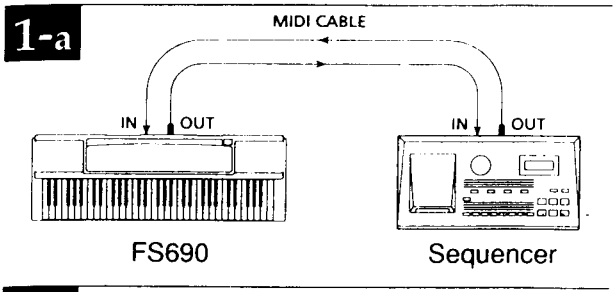
First, connect the FS690 MIDI Out jack to the MIDI In jack of another keyboard or tone generator. Make sure that the FS690's MIDI transmit channel matches the MIDI receive channel of the tone generator or other keyboard. Then, pressing a key on the FS690's keyboard will cause both the FS690 and the other instrument to play a sound simultaneously. Or, if you connect the FS690 to a keyboard which has a multi-timbral function (which would allow it to receive signals over a number of different MIDI channels at once), you can play the FS690's Auto-Accompaniment and Rhythm patterns through the other instrument as well. (See page A – 9 for Rhythm key numbers.)

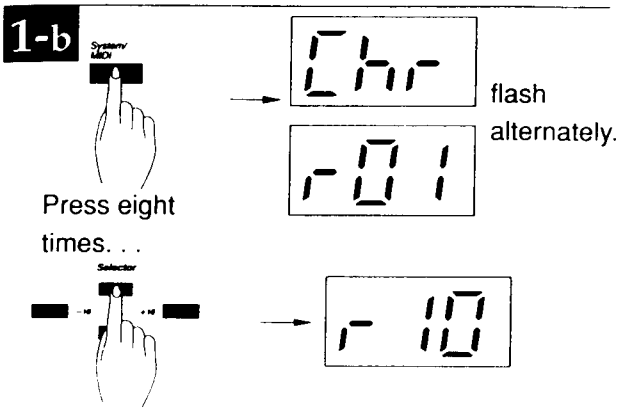
■ Connecting the FS690 to a sequencer

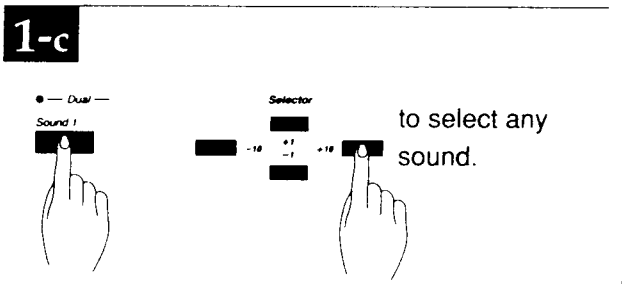
1. Creating a song like the FS690's demo song

When using the FS690's MIDI functions, you can create a song with four parts plus a drum part. These four parts can all play together from the beginning of the song to the end of the song, just as the melody you play by hand and the Auto-Accompaniment part play together from the start of a song to its end.

Using the MIDI Functions: Creating Songs







a) First connect the FS690 to a sequencer

Connect the FS690 to a sequencer as shown in the diagram at left.

b) Create a drum part

First, set the lower mode to "DRUM".

Press the **System/MIDI** button eight times. The display will begin to flash, alternately showing Chr and r01.

Use the **Selector +1** button to change the r01 to r 10. This changes the FS690's MIDI Transmit channel to channel 10.

If you start the sequencer recording now, you can use it to record a drum part. If you raise or lower the volume while recording using the **Rhythm volume** buttons, these changes will also be recorded by the sequencer.

c) Create the other parts

If you have left the SYSTEM/MIDI mode, press the **System/MIDI** button eight times. The display will begin to flash, alternately showing Chr and r 10.

Use the **Selector -1** button to change the r 10 to r01.

The FS690's MIDI Transmit channel is now set to channel 1. If you press one of the keys on the keyboard, the keyboard will play whatever sound is currently selected. Use the **Selector** buttons to select the sound of your choice.

Now you can use the sequencer to record the part for that sound. Volume changes made using the **Volume** buttons for each part will be recorded by the sequencer as before.

Using the MIDI Functions: Creating Songs

To record other parts, use the **System/MIDI** button and the **Selector** buttons as before to change the MIDI Transmit channel to any channel from 2 through 4. Then, select the sound you will use for the new part and record it as before. Of course, if you change the sound you are using in the middle of the recording, the sound change will also be recorded. Therefore, it is not necessary to assign three solos – say, a sax solo, a guitar solo, and an organ solo – to three separate channels. You can record them all on one channel by simply changing the sound as you record.

To summarize, drums can be recorded by your external sequencer when the FS690 is set to MIDI Transmit channel 10. Sounds are recorded when you use MIDI Transmit channel 1 through 4.

This gives you five multi-timbral channels for recording separate tracks.

Note:

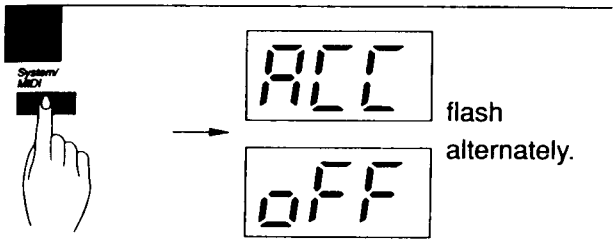
If you raise or lower the volume while recording using the **MASTER VOLUME** buttons, these changes will ***not*** be recorded by the sequencer.

Notes:

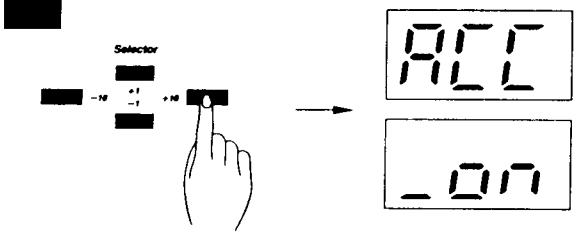
"MIDI" is an acronym for
Musical Instrument Digital Interface.

MIDI provides a method for the FS690 to communicate with other MIDI-equipped instruments or computers.
It is not the purpose of this manual to discuss in depth the many uses and techniques of MIDI operation.
For complete books on this subject, KAWAI recommends that you consult your local music dealer or contact the MIX BOOKSHELF (6400 Hollis St., Suite 12, Emeryville, CA 94608 U.S.A. Phone 415-653-3307) to request their catalog of MIDI materials.

Using an External Sequencer: Sending Automatic Functions



Press five times. . .



During normal operation, the FS690 does not send (transmit) automatic information (Auto-Accompaniment and ONE FINGER AD-LIB) via MIDI. You can, however, enable the FS690 to send this information by using the **System/MIDI** button.

■ Using a sequencer to record FS690's Automatic functions. (Auto-Accompaniment, ONE FINGER AD-LIB).

Begin by pressing the **System/MIDI** button five times. The display should begin to flash, alternately showing the letters ACC and oFF.

The ACC stands for Accompaniment. The off signifies that the FS690 is not currently sending "Automatic" information via MIDI.

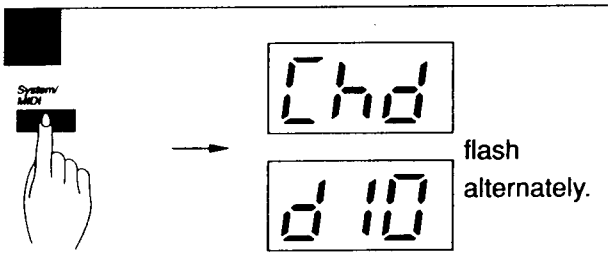
If you press the **Selector +10** button, the oFF should change to read _on. This indicates that the Auto-Accompaniment will be transmitted via the MIDI connection.

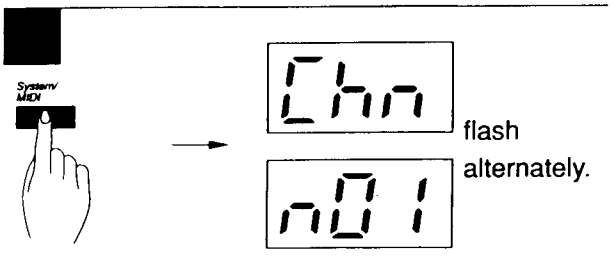
You may now start the sequencer recording and begin your performance. Each part will be sent to the sequencer by way of a different MIDI channel, as shown below:

Channel	Part
1	SOUND1 (Your melody, ONE FINGER AD-LIB)
2	SOUND2 (Your melody, ONE FINGER AD-LIB)
3	Chord part
4	Bass part
10	Rhythm part

On playback, your performance should sound exactly the same as it did when you recorded it.

Using an External Sequencer: Sending Automatic Functions





● **Changing MIDI Channels**

At some point during recording, you may find it necessary to change the MIDI channel for a specific part. Here's how it can be done:

When the ACC is set to"oFF", the FS690 receives MIDI data on several channels but transmits on only one MIDI channel (referred to as "r"). The MIDI channel assignments are found below:

Transmit Channel = r (see page A-27 to adjust the "r")
Receive Channel of Sound 1 = n (see the following explanation to adjust the "n")
Sound 2 = n+1
Chord = n+2
Bass = n+3
Rhythm = d (see the following explanation to adjust the "d")

When the ACC is set to "on", the FS690 will both transmit and receive MIDI data on the same MIDI channels. The channel assignments are:

Sound 1 = n, Sound 2 = n+1, Chord = n+2, Bass = n+3, Rhythm = d.

● **To change the Rhythm part channel**

Press the **System/MIDI** button seven times or until the display flashes, alternately between Chd (which is an abbreviation for "Channel, Drum") and d 10. This indicates that the Rhythm part is being output through channel 10. If you use the **Selector +1** button to change the number in the display to read d 11, the Rhythm part will be output through channel 11.

● **To change the channels of the other parts**

Press the **System/MIDI** button six times or until the display flashes, alternately between Chn and n01. This indicates that the melody and ONE FINGER AD-LIB phrases you play using SOUND 1 will be output through channel 1.

Using an External Sequencer: Creating Patterns

If you use the **Selector +1** button to change the display to read ∩02, then the melody and ONE FINGER AD-LIB phrases you play using SOUND 1 will be output through channel 2; the melody and ONE FINGER AD-LIB phrases you play using SOUND 2 will be output through channel 3; the Auto-Accompaniment Chord part will be output through channel 4; and the bass part will be output through channel 5.

You can see that the channel number for melody using SOUND 1 determines the channels for the other three sounds – which are assigned to the next three successive channels.

In other words, if the channel which outputs the melody and ONE FINGER AD-LIB phrases is channel "N", then SOUND 2 outputs through channel N+1; the Chord part outputs through channel N+2; and the bass part outputs through channel N+3.
The number shown in the display is the channel number ∩.

Suppose you want to create a complete Accompaniment pattern on an external sequencer (such as KAWAI's professional MIDI sequencer, the Q-80) and store it in the FS690's user memory for use with the Auto-Accompaniment feature. Here's how it can be done:

■ Recording Auto-Accompaniment patterns created with an external sequencer for use with the FS690

Note: Quantize is set to ♩ = 24.

1. First program the Accompaniment pattern into your external sequencer. Remember that the Intro and Fill in patterns you create should be one measure long. The Basic and Ending patterns should be two measures long.

Using an External Sequencer: Creating Patterns

2. Next make sure that the external sequencer's Playback (Transmit) channels and Rhythm, Chord and Bass channels of the FS690 are the same. You can check or change the Rhythm channel by pressing the **System/MIDI** button seven times as described in page A-30.
3. Use the **Tempo ▼** button to change the display until it reads SYC (short for SYNC.).
4. Prepare the FS690 to record the pattern into user memory. Record the Rhythm part first. Begin by pressing the **User Program Pattern & O.F. AD-LIB** button, just as you did when you created an Auto-Accompaniment pattern. Then select which of the four pattern types (Basic, Intro, Fill in, or Ending) you are going to record from the sequencer. Then select the Rhythm part by pressing the G#5 key. Now the FS690 is set to record your pattern from the external sequencer. When you playback the Rhythm pattern from the external sequencer, the FS690 will begin recording in SYNC with the sequencer.
5. Record the other parts (chord, bass) once again, making sure that your Playback (Transmit) channels for chords and bass are matched with the appropriate channels on the FS690. The chords should be set to transmit from the external sequencer on channel N+2. The bass should transmit on channel N+3. (Refer to page A – 30 of this manual to review the channel assignment procedure for the FS690.)
   - Repeat Steps 3 and 4 above to prepare the FS690 for recording. Select the appropriate pattern type. Remember that Intro and Fill-in patterns should be one measure long while Basic and Ending patterns should be two measures long.
   - Now play back the pattern from your external sequencer. The complete pattern should now be ready to be assigned to a user memory location.
6. Storing your pattern. The final step is to store your new pattern on one of the five user memory locations using the **Store/Recall**button and **Selector** buttons.

   If necessary see Page A – 19 of this manual to review this procedure.

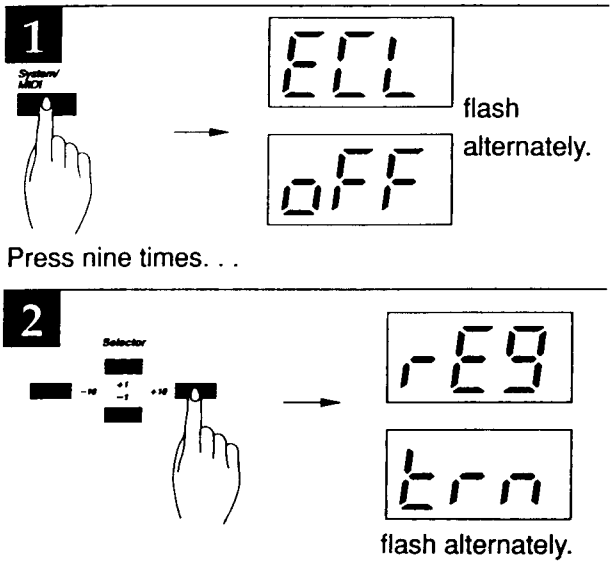
Using an External Sequencer: Creating O.F. AD-LIB Phrases

You can also use the same procedure described in the preceding pages to create ONE FINGER AD-LIB phrases on an external sequencer and store them in the FS690's user memory.

■ Recording ONE FINGER AD-LIB phrases created with a sequencer for use with the FS690

1. First, program your ONE FINGER AD-LIB phrase into the external sequencer. Remember that ONE FINGER AD-LIB phrases can only be one measure in length.
2. Prepare the FS690 to record.
   - Use the **Rhythm** and **Selector** buttons to select the Accompaniment pattern you want as back-ground for your ONE FINGER AD-LIB phrases.
   - Make sure that the Playback (Transmit) channel of your external sequencer matches the FS690's Receive channel for Sound1 (the default is channel 1).
   - Now press the **User Program Pattern & O.F. AD-LIB** button, just as you did when you were creating ONE FINGER AD-LIB phrases.
3. Record the phrase
   Use the **Tempo ▼** button to change the display so that it reads SYC (which, you will recall, is short for SYNC.). Now, when you playback the phrase from the sequencer, it will be recorded as the ONE FINGER AD-LIB phrase for the ONE FINGER AD-LIB key that is currently selected.
4. By selecting different ONE FINGER AD-LIB keys, you can record different phrases from the external sequencer. When you are through recording new phrases, use the "storing" procedure (see page A – 22) to store the new Ad-Lib phrases in user memory along with the corresponding Accompaniment pattern.

Using the External Sequencer: Using Other Functions



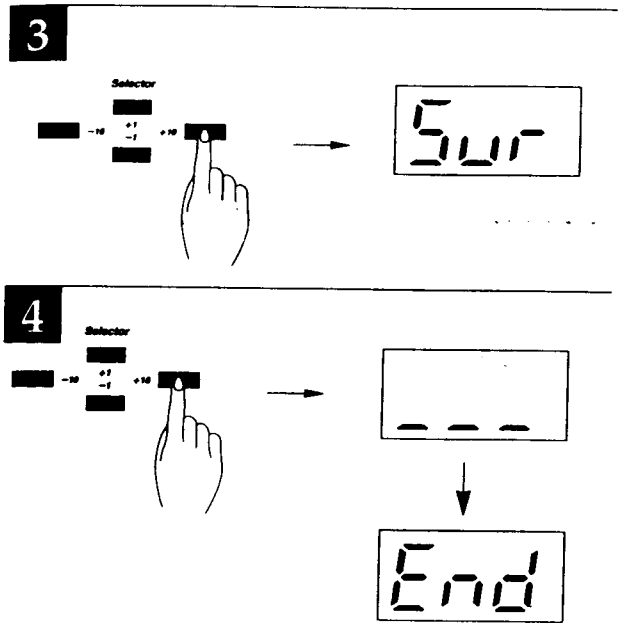
As you know, it is possible to store the sounds and patterns you create in the FS690's user memory. However, the number of sounds and patterns you can store in this way is limited to five each. To increase your stock of sounds and patterns, the FS690 allows you to store them in an external sequencer (such the Q-80, a data filer, or some other external MIDI device). You can store the following data using this function:

- Five sounds created using the synthesizer function
- Five Auto-Accompaniment patterns plus corresponding ONE FINGER AD-LIB phrases
- Twenty sets of REGISTRATION data

■ Storing REGISTRATION data you create for the FS690 in an external sequencer:

1. Begin by pressing the **System/MIDI** button nine times. The display will begin to flash, alternating between the letters ECL (which is short for "Exclusive") and oFF.
2. If you press the **Selector +10** button once, the display will change so that it reads rEG (short for "REGISTRATION") and trn (short for "Transmit") alternately. By this, the FS690 is asking whether you want to transmit your REGISTRATIONs to another MIDI device.

Using the External Sequencer: Using Other Functions



3. Since this is exactly what you want to do, press the **+10** button once again. The display will change to read Sur, which means "Sure?"
4. Press the **+10** button one more time, and the display will read ___ for a few moments, then change to read End. Your data transmission is now complete.

■ Storing other data you create for the FS690 in an external sequencer:

Follow the step 1 and step 2 in page A-34 as you did in storing registration data.

After this, pressing the **System/MIDI** button will change the display to read, first SYn (Synthesizer), then ACC (Auto-Accompaniment), then oFA (ONE FINGER AD-LIB). Pressing the **+10** button twice when you see any of these displays will cause the FS690 to transmit the data for the part indicated by the display to an external MIDI device.

■ Sending stored data back to the FS690 from an external sequencer:

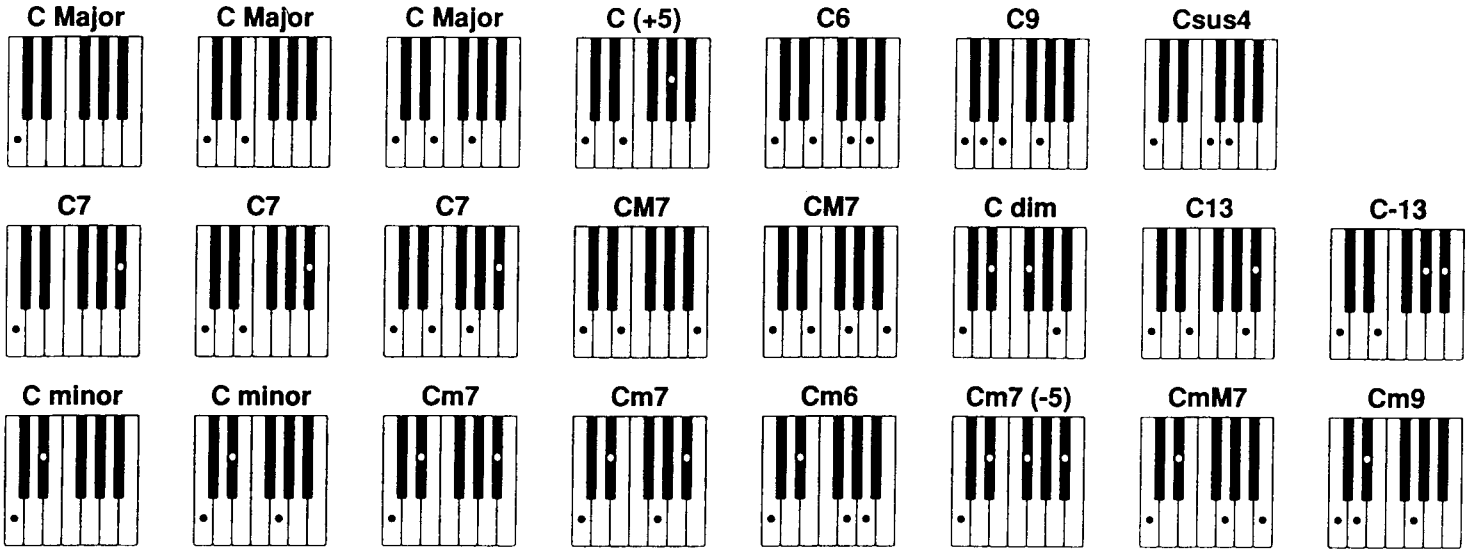
No special command is necessary to perform a data dump into the FS690. Simply command your external sequencer to transmit data to the FS690. The FS690 will receive this data automatically.

These are a few examples of the ways in which the FS690's MIDI functions can be used. There are sure to be many more interesting and enjoyable things you can find to do with MIDI.

Its possibilities are limitless!

3. Appendices

How to play chords that FS690 can recognize (C root)



Sound #			
WAVE A		WAVE B	
Level		Level	
Attack		Attack	
Decay		Decay	
Sustain		Sustain	
Release		Release	

Sound #			
WAVE A		WAVE B	
Level		Level	
Attack		Attack	
Decay		Decay	
Sustain		Sustain	
Release		Release	

Registration #			
Rhythm		Tempo	
Sound 1		Dual	
Sound 2		Detune	
Effect	Sustain ON•OFF	Level	Melody
	Chorus ON•OFF		Chord
	Duet ON•OFF		Bass
O.F. Ad-Lib	ON•OFF		Drum
Lower Mode	OFF•AUTO•DRUM		

Registration #			
Rhythm		Tempo	
Sound 1		Dual	
Sound 2		Detune	
Effect	Sustain ON•OFF	Level	Melody
	Chorus ON•OFF		Chord
	Duet ON•OFF		Bass
O.F. Ad-Lib	ON•OFF		Drum
Lower Mode	OFF•AUTO•DRUM		

KAWAI

Date : Apr 1. 1991

Model : FS690

MIDI Implementation Chart

Version : 1.0

Function...		Transmitted				
		SOUND 1/2	CHORD/BASS	RHYTHM	SYSTEM	Remarks
Basic Channel	Default	1/2	3/4	10	1	
	Changed	1 – 16 (N/N+1)	1 – 16 (N+2/N+1)	1 – 16 (D ch)	1 – 16 (R ch)	
Mode	Default	3	3	3	3	
	Messages	X	X	X	X	
	Altered	*******	*******	*******	*******	
Note Number		24 – 108	0 – 127	36 – 54	24 – 108	
	True Voice	*******	12 – 108	12 – 108	*******	
Velocity	Note ON	○	○	○	○	
	Note OFF	X 9n v = 0	X 9n v = 0	X 9n v = 0	X 9n v = 0	
After Touch	Key's	X	X	X	X	
	Ch's	X	X	X	X	
Pitch Bend		○	○	X	○	5bit rese ±2semi
Control Changes	1	X	X	X	X	Modulation
	7	○	○	○	*○	Volume
	64	○ (N)	X	X	*○	Hold
	93	○ (N)	X	X	*○	Chorus
Prog Change	True #	○ 0 – 99	○ 0 – 99	○ 0 – 99	○ 0 – 99	
System Exclusive		*******	*******	*******	○	
Common	: Song Pos	*******	*******	*******	X	
	: Song Sel	*******	*******	*******	X	
	: Tune	*******	*******	*******	X	
System Real Time	: Clock	*******	*******	*******	○	
	: Commands	*******	*******	*******	○	
Aux Messages	: Local ON/OFF	*******	*******	*******	X	
	: All Notes OFF	*******	*******	*******	X	
	: Active Sense	*******	*******	*******	○	
	: Reset	*******	*******	*******	X	
Notes		* When "Auto Send" is off.				

Mode 1 : OMNI ON, POLY

Mode 2 : OMNI ON, MONO

Mode 3 : OMNI OFF, POLY

Mode 4 : OMNI OFF, MONO

○ : Yes

X : No

KAWAI

Date : Apr 1. 1991

Model : FS690

MIDI Implementation Chart

Version : 1.0

Function...		Recognized				
		SOUND 1/2	CHORD/BASS	RHYTHM	SYSTEM	Remarks
Basic Channel	Default	1/2	3/4	10	1	
	Changed	1 – 16 (N/N+1)	1 – 16 (N+2/N+1)	1 – 16 (D ch)	1 – 16 (R ch)	
Mode	Default	3	3	3	3	
	Messages	X	X	X	X	
	Altered	*******	*******	*******	*******	
Note Number		0 – 127	0 – 127	36 – 54	*******	
	True Voice	12 – 108	12 – 108	12 – 108	*******	
Velocity	Note ON	○	○	○	*******	
	Note OFF	X	X	X	*******	
After Touch	Key's	X	X	X	*******	
	Ch's	X	X	X	*******	
Pitch Bend		○	○	X	*******	5bit rese ±2semi
Control Changes	1	X	X	X	X	Modulation
	7	○	○	○	○	Volume
	64	○ (N)	X	X	○	Hold
	93	○ (N)	X	X	○	(Chorus)
						Moduration → Vib Depth
Prog Change		○	○	○	○	100 – 119
	True #	0 – 99	0 – 99	0 – 99	0 – 119	→ Registration
System Exclusive		○	○	○	○	
Common	: Song Pos	*******	*******	*******	X	
	: Song Sel	*******	*******	*******	X	
	: Tune	*******	*******	*******	X	
System Real Time	: Clock	*******	*******	*******	○	Only when TEMPO=SYNC
	: Commands	*******	*******	*******	○	
Aux Messages	: Local ON/OFF	*******	*******	*******	X	
	: All Notes OFF	○	○	○	*******	
	: Active Sense	*******	*******	*******	○	
	: Reset	*******	*******	*******	X	
Notes						

Mode 1 : OMNI ON, POLY

Mode 2 : OMNI ON, MONO

Mode 3 : OMNI OFF, POLY

Mode 4 : OMNI OFF, MONO

○ : Yes

X : No

Specifications

FS690

Keyboard:	61 keys, standard
Sounds:	100
Rhythms:	100
Effects:	Stereo chorus, Sustain, Pitch bend, Duet
Rhythm controls:	Start/Stop Intro/Ending Sync./Fill in Tempo
Recorder:	Rec/end Play/stop Song/select
Auto-Accompaniment:	Lower mode select
User program:	Synthesizer Pattern & ONE FINGER AD-LIB Registration Store/Recall
Volume controls:	MASTER VOLUME Melody volume Chord volume Bass volume Rhythm volume
Miscellaneous controls:	ONE FINGER AD-LIB button DEMO button System/MIDI button
Speakers:	12 cm x 2
Rated voltage:	9-12 V DC: six size C dry cell batteries or power adaptor (PS-121 or PS-123)
Accessory jacks:	MIDI IN/OUT HOLD PEDAL ACC. HOLD RCA STEREO OUT DC (9-12 V) IN HEADPHONE
Accessories:	six size C dry cell batteries music rack